EDUCATIONAL METHOD

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SCIENTIFIC METHOD IN TEACHING

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There are several reasons why this is a good time to stress the improvement of teaching. A forward look is essential to morale, and the state of public finance makes it unlikely that progress will be made in other lines of effort. New buildings will doubtless have to wait, and there is not much hope that further expansion of the curriculum will take place immediately. On the other hand, something may be done to improve teaching method without adding materially to school expenditures.

Emphasis on method is also properly in order. Great advance has recently been made in measurement. Many good standard tests are available, and teachers are fairly well trained in making objective tests of their own. The curriculum has been thoroughly overhauled and reorganized on a scientific basis. Educators are substantially in agreement as to what should be taught in such subjects as reading, penmanship, arithmetic, spelling, and geography. The task of bringing teaching method into harmony with measurement and content yet remains.

As a matter of fact, most teachers now use systematic method. This is a good point, for nearly any systematic method of teaching produces better results than can be obtained through unsystematic teaching. Few teachers, however, use scientific method. They rely upon procedures which contain a large element of logic and philosophy. Scientific method possesses marked advantages over other systematic methods of teaching.

Some of the deficiencies in non-scientific methods may be indicated. The use of logic means that teaching has not been fully divorced from the obsolete past; that while teaching the most modern content—content in which science is dominant—the teacher uses antiquated tools in that teaching. There is lack of integration between substance and process, and the tendency is to hold to subject divisions rather than to integrated life content. The old method provides no training of a type which pupils will have occasion to use in their daily lives.

Science touches every aspect of our lives today, and every purchase and use of its product involves scientific method. The twenty million automobiles, an equal number of telephones, the twelve million radios, the nine million electric irons—all are scientific products. Invention, an aspect of science, has given us alarm clocks, safety

razors, typewriters, shower baths, electric fans, and the X-ray. Sewing, cooking, cleaning, lighting, heating, transportation, and communication are all managed science.

Much of our teaching method in practice can be traced to two sources. The first is tradition; the second is philosophy. Traditionalists teach as their own instructors taught. Their work has a large element of *common sense* in it, but is not scientific. Of philosophers, most is owing to Herbart for teaching method. One of the most talked-of plans today is derived from Herbart, with the addition of accurate measurement, a contribution of our own times. Herbart lived and did most of his work in an era when society was passing through that remarkable transformation known as the Industrial Revolution. Apparently he was unaware of it and likewise did not understand that the fundamental cause of this tremendous change was the scientific movement.

The writer wishes to make the suggestion that we substitute scientific method for all other methods of teaching. The strongest objection the proposal is likely to draw forth is that the new method is mechanical and transgresses child nature. This criticism cannot well be maintained. In the first place, scientific method is the system by which truth is discovered and applied. Its products are *truth* and *utility*.

Now science consists wholly (in the last analysis) of the facts, principles, and laws of nature. Its applications, to be effective, must be in harmony with these laws. Children are a part of nature or, can one say, they are nature. Consequently, scientific method must be in harmony with child nature, *else it is not scientific*.

The scientific process is simple. It begins with a problem; it ends with the application of the discovered principle to the satisfaction of human needs. Two divisions in the method are usually recognized. The first may be called the *method of discovery*; the second, *the method of application* or use. Discovery begins with a problem and ends when the solution has been found, in a generalization or law. Use begins with an objective and ends when satisfactory results (in terms of human welfare) have been attained.

The process may be illustrated from the life of Washington. Suppose that the problem is, "Was Washington a scientific farmer?" Data are collected showing that Washington conducted controlled experiments in farming, that he tested seed before sowing it, that he improved his live stock by selection. After comparing such facts with contrasting facts, the conclusion may be reached that he was scientific.

The first division of the scientific process has been reached when this principle has been properly verified. It now remains to apply or use some aspect of it. Assume that the pupils wish to plant a garden. They may apply Washington's principle of seed testing, of fertilizing the soil, and of cultivating the plants. When the product is measured and utilized as flowers and vegetables are used, the second division may be said to be complete. Experience with a garden carries a lesson for improving the plan, should another garden be planted.

Although the use of scientific method in teaching would in time render inevitable a new integration of subject matter, it may be connected with present school subjects. Nature study, history, geography, and hygiene belong to the division termed *discovery*. Subjects which classify readily as "applied science" are spelling, reading, language, arithmetic, and penmanship. The so-called fine arts are now representative of truth, or use, or of common sense and conjecture. Industrial arts are typically applied science.

The connection between scientific method and content may be shown much more easily if subject matter is in integrated form. Three aspects of science then may be seen: (1) social science, (2) natural science, and (3) the arts. The last class is probably more or less an artificial division, and may more properly be grouped with social science. In this case, social science and natural science would constitute the curriculum.

Social science includes language, which is now presumed to comprise such "applied" subjects as spelling, reading, writing, and language proper. Arithmetic is, of course, a part of social science, as are the arts. Under natural science would be grouped such fields of activity as geography, hygiene, biology, etc. As is clear, history classifies as social science.

Further explanation of the place of the arts should be offered. One should keep in mind that two divisions of scientific method have been set forth, *truth* and *utility*, the first the product of discovery, the second of use. The function of art is to reveal or represent truth and usefulness, or both. In the highest forms of art, the details of facts and phenomena are reduced to the minimum, and the essential substance of *truth* or *utility* is clearly revealed.

This clear revelation of truth or usefulness (or of both) constitutes beauty. The combination of truth and utility is dynamic; when perfected to the highest degree, it is the highest type of beauty. An automobile, a ship, an aeroplane, an express train—all, in their best form, are good examples of beauty. One sees in them nearly perfect harmony between truth and utility. The highest type of beauty is intrinsic; a thing beautiful in itself is more beautiful than any representation of it can be.

There is another factor in scientific method to be stressed. Method always signifies order, system, pattern, integration. Its product in the scientific sense is certain, stable, and universal. It meets the tests, "Is it true?" "Will it work?" "Would I trust my life to it?" A beautiful life is one in which there is harmony between truth and usefulness. Such an one is said to have character, and character is distinguished by pattern, stability, universality. Character building is one of the objectives of scientific method.

A simple outline of scientific method follows. It is divided into two parts: (1) the method of discovery or problem solving, and (2) the method of application or use. The teacher should remember, however, that neither part alone is scientific method. It takes the whole process from problem to results to make the complete method of science. One who uses only part cannot truly call himself a scientist. If he uses the first part, he may call himself a discoverer; if he uses the second part, he may call himself an engineer; but in neither case is he a genuine scientist.

The method of *discovery* or *truth* may be outlined as follows:

1. *Finding the problem.* This is equivalent to what is known as the assignment in the recitation method. In science, the problems should be the children's, for science is democratic. It does not impose from above. The teacher's part is to guide the activity. When a problem is found, it should be put into the typical form of "What is the cause of . . .?" "What is the explanation or truth about . . .?"
2. *Planning the attack.* This consists of a working schedule. It may begin with an inventory of knowledge and skills on hand, include a list of sources of data and of needed equipment, a standard of achievement, and a tentative method of working.
3. *Collecting the data.* The pupils find facts bearing upon their problems. They record the facts and put them into organized form. Many call this a study activity.

4. *Generalizing from their data.* The pupils formulate answers to their questions on the basis of the facts at hand.
5. *Verifying the process.* They check their work to find out whether their facts are accurate and adequate.
6. *Evaluating the work.* The pupils submit their work to criticism, obtain suggestions for improving it, and show how the results may be used. They may take a *test* or compare their product and method with standards.

The method of *application* or *utility* takes the following form:

1. *Selecting an objective.* The pupils decide upon an objective (something to do) in accord with their interests, needs, and abilities. This is also sometimes known as assignment.
2. *Planning the work.* The pupils make an *estimate of the situation* with which they are faced. They plan a working schedule which will enable them to realize their objective. They list the materials they will require. They decide upon a method of work.
3. *Demonstrating the process.* A simple demonstration of the accepted process is shown. This is given by the teacher or by a capable pupil.
4. *Performing the process.* The children carry out their process to the best of their ability, continuing until (1) the goal is reached, (2) a satisfactory standard has been attained, or (3) the time limit is up.
5. *Evaluating the work.* The results are measured, judged, or compared with a standard. Suggestions are made for improving the plan in the future. A *test* may be taken.
6. *Repeating the process.* If desirable, the modified process is repeated until the performance is acceptable.

In connection with the planning step, there is abundant opportunity for *invention.* This should be encouraged. In connection with evaluation, there is a fine opportunity for creative work of an artistic type, since the product must be made ready for presentation to the *class, school,* or other *group.* One should also observe that *pupil activity* is a significant feature of scientific method, activity of the self-motivated type.

The writer realizes that scientific method has elements in common with other recognized plans of teaching. The method of discovery is nearly identical with what has been long known as the *problem method*; the method of application is almost the same as the well-known *project method.* Showing the relationship between the two and their identity with a complete process from problem to results is the novel feature.

In conclusion, one may say that there is abundant proof that scientific method works. Its application to teaching will give teachers a feeling of satisfaction and certainty which many find lacking in other methods. It will help to reduce school failures, and will promote learning and character. It will give the teacher mastery over a process she can rely upon through life, a method never out of date. It will help to unify the school with life outside the school. Finally, it will satisfy children, because it is an intrinsic part of the great universe of nature to which they, too, belong.

THE RELATIVE IMPORTANCE OF THE DUTIES AND ACTIVITIES OF THE GENERAL ELEMENTARY SUPERVISOR IN CITY SCHOOLS

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Several studies have been made to determine what constitutes the duties and activities of the supervisors in the elementary schools, but few were restricted to the general elementary supervisor as viewed in this study. The term general elementary supervisor as hereinafter employed refers only to those members of the staff to whom is delegated the responsibility for the general oversight and direction of the instructional program in the elementary grades as a whole. Since school systems vary in their organization, the range of grades assigned to such officers will vary with the system. Special supervisors, service directors, part-time supervisors, supervisors of secondary instruction, building principals, and superintendents are not included.

One of the most significant and probably the most extensive investigations made recently on the work of the general elementary supervisor is that of Maycie Southall.[1] This study, however, is concerned primarily with an evaluation of six agencies commonly employed by supervisors in the improvement of teachers in service, viz., classroom visitation, directed teaching, demonstration teaching, directed observation, individual conference, and teachers' meetings, and not with the general scope of supervisory activities.

It is readily admitted that a knowledge of central tendencies of present practice is of value, but if progress is to be made, supervisors should be trained for activities which they should perform rather than merely those which they do perform. Using central tendencies of present practice as a basis for constructing training programs tends to maintain a *status quo* of practice and technique and is not conducive to progress. It was decided, therefore, to submit a check list of supervisory activities to an accredited jury made up of general elementary supervisors in the field, superintendents who maintain a supervisory organization in their own system in which there is a general elementary supervisor, and recognized leaders in education whose major interest is in the elementary field. These were asked to rate each item of the check list as to whether it is of (a) major importance, (b) minor importance, or (c) no importance to the general elementary supervisor.

A careful checking of several extensive bibliographies on educational research revealed no study that had been made thus far to determine what duties and activities the general elementary supervisor should perform. Accordingly, a check list of supervisory activities was evolved as a result of an extensive search of the available educational literature. A scrutiny of textbooks, dissertations, theses, monographs, yearbooks of educational groups, societies, and conferences, and magazine articles

[1] Southall, Maycie, *Directed Agencies in Supervision as Used by General Elementary Supervisors.* Contributions to Education, No. 66, George Peabody College for Teachers, 1930.

TABLE I

PERCENTAGE OF ELEMENTARY SUPERVISORS, SUPERINTENDENTS, EDUCATIONAL SPECIALISTS, AND THE WHOLE JURY WHO RATED THE SEVERAL ACTIVITIES OF THE CHECK LIST AS OF MAJOR IMPORTANCE TO THE GENERAL ELEMENTARY SUPERVISOR

Activities	Percentage of			
	1	2	3	4
I. Perform Professional Duties				
1. Keep in touch with the latest developments in the field of education	100	100	100	100
2. Give publicity to investigations and experiments that have been successfully carried on by teachers under his supervision	66	53	76	64
3. Write for publication articles and books pertaining to education	32	15	12	24
4. Attend professional group meetings	96	85	76	90
5. Serve on educational committees	66	62	53	63
6. Address professional groups	49	38	47	45
II. Improve Teachers in Service				
1. Through building up team-work, morale, esprit de corps				
a. Arrange for meetings at which inspirational lectures are given by educational experts	78	38	35	60
b. Appoint committees of teachers to attack problems in which they are mutually interested	88	88	94	89
c. Make occasional classroom visits for the sole purpose of cultivating friendly relationships	56	41	59	52
d. Arrange for an occasional social gathering of the teachers	27	17	29	25
2. Through directed professional growth				
a. Direct or conduct courses in professional reading or study for teachers	71	68	94	73
b. Organize and maintain a professional library for teachers	60	61	70	61
c. Encourage teachers to support and attend professional organizations	68	65	59	65
d. Encourage teachers to obtain additional training in approved teacher training institutions through summer sessions, correspondence, and extension courses	79	82	76	80
3. Recommend a sabbatical leave for teachers of promise	27	18	24	24
4. Recommend the transfer of teachers	58	56	47	56
5. Arrange for teachers to visit in other systems	56	32	53	49
6. Give due recognition to teachers when referring to or making use of the products of their efforts	97	94	88	95
7. Arrange office hours for the convenience of those supervised	91	85	76	87
III. Construct and Revise the Curriculum				
1. Prepare a list of guiding principles for curriculum making	80	79	76	79
2. Organize teacher committees for curriculum study	87	97	88	90

Note: Column 1—Elementary Supervisors
Column 2—Superintendents
Column 3—Educational Specialists
Column 4—Whole Jury

TABLE I (*Continued*)

Activities	Percentage of			
	1	2	3	4
3. Prepare a list of educational objectives for each grade	80	79	75	81
4. Make a tentative grade placement of new curriculum materials	88	74	69	81
5. Devise a plan to secure integrated units of subject matter	92	76	81	85
6. Direct and counsel with teachers engaged in making or revising the curriculum	98	94	100	97
7. Plan for the continuous and systematic revision of the curriculum	94	88	94	92
8. Organize instructional projects	81	74	81	78
9. Advise and assist in the collection of supplementary instructional materials (*e.g.*, books, maps, bulletins)	93	65	76	82
10. Select or approve all instructional supplies and equipment used in the classroom, such as textbooks, charts, self-checking devices	78	56	82	72
11. Prepare bulletins of the most economical and efficient distribution and use of instructional materials and supplies	73	53	71	67
IV. Render Community Service				
1. Attend miscellaneous community meetings	32	9	6	22
2. Participate in social, civic, and educational organizations of the community	63	41	47	54
3. Interpret the administrative policy to the community by means of the press and speeches	60	53	53	57
4. Use the press, personal contacts, and school exhibits to enlist the interest and coöperation of the community in school activities	81	71	71	76
V. Perform Clerical Duties				
1. File reports of the supervisory classroom visits made	31	27	38	31
2. File records of the individual conferences held	30	27	44	31
3. Make form reports to the superintendent and board of education	41	35	31	38
4. Keep miscellaneous temporary records	31	24	31	29
VI. Perform Administrative Duties				
1. Plan the organization of special classes (*e.g.*, lip-reading classes, the opportunity room)	68	65	74	68
2. Assist in the selection and assignment of teachers	78	59	81	73
3. Rate teachers (a) on a score card	36	31	38	35
(b) on the basis of pupils' reactions to tests	20	33	38	26
4. Coördinate the work of auxiliary agencies and classroom teachers	53	55	63	54
5. Supervise the work of subject supervisors	54	65	75	60
6. Make special promotions of pupils	39	20	25	32
7. Visit classrooms to determine whether or not instructions are being carried out (*i.e.*, for inspection only)	26	39	44	32
8. Inspect and make recommendations to the superintendent concerning the physical equipment of the classrooms, such as lighting, heating, blackboards, etc.	57	44	38	51

TABLE I (*Continued*)

Activities	Percentage of			
	1	2	3	4
VII. Improve the Technique of Teaching				
1. Through teachers' meetings				
a. Give summary reports with constructive criticisms on instructional problems observed during classroom visits	93	85	76	88
b. Have teachers report on excellent teaching techniques which they have noted during observation periods	90	85	94	89
c. Have teachers report on investigations and experimental projects completed or in progress	96	88	100	94
d. Have teachers report and discuss recent educational articles and books	72	59	65	67
e. Conduct forums on special instructional problems	87	74	94	84
f. Introduce new methods, teaching materials, or devices	96	79	100	91
g. Discuss and interpret courses of study	96	88	94	93
h. Exhibit specimens of classroom work	66	62	47	62
2. Through group conferences				
a. Make self-preparation for group conferences	100	100	100	100
b. Formulate and define the aims and objectives of instruction	94	82	100	91
c. Discuss the general principles of teaching	87	82	88	86
d. Present and discuss desirable				
(1) General methods of teaching	90	88	88	90
(2) Special methods or devices	82	82	76	81
e. Counsel with teachers having the same type of difficulty, or similar teaching problems	93	100	88	94
3. Through supervisory bulletins				
a. Prepare bibliographies of reading references and self-helps to meet the individual needs of the teachers	89	74	94	85
b. Provide lists of lesson helps, supplementary projects, and instructional materials and supplies available to the teachers	85	76	76	81
c. Provide for the teachers in advance a brief or outline of the topics to be discussed in teachers' meetings or conferences	79	70	76	76
d. Provide for teachers' files a summary of the teachers' meetings and conferences	34	39	47	38
e. Present a review of the findings and recommendations from investigations made in research laboratories or in other school systems	68	50	71	63
4. Through tests and measurements				
a. Administer objective tests				
(1) to diagnose pupils' difficulties	70	65	47	65
(2) to classify pupils	57	64	41	56
(3) to measure the growth or progress of pupils	68	73	35	64
(4) to direct the use of teaching techniques	68	72	53	66
b. Train and direct teachers in the selection and use of standardized objective tests	64	56	76	64

TABLE I (*Continued*)

Activities	Percentage of			
	1	2	3	4
c. Train teachers in the preparation and use of informal objective tests	76	70	76	75
d. Tabulate and interpret the results of standard tests	79	70	47	72
5. Through directed teaching				
a. Observe the teacher's work on her invitation	100	85	100	96
b. Supervise the planning of lessons which teachers present for supervisory criticisms	72	68	82	72
c. Observe lessons as a follow-up of a former visit or conference	100	94	94	97
6. Through directed observation				
a. Send the teacher who needs help in a given teaching technique to observe another who is skilled in the same	96	79	82	89
b. Require the visiting teacher to observe and report on points of technique previously selected in conference with the supervisor	79	71	71	75
c. Arrange a subsequent conference for the visiting and the visited teacher	74	53	59	66
d. Arrange for an exchange of visits between teachers of consecutive grades	69	44	59	60
7. Through individual conferences				
a. Make self-preparation for individual conferences	100	97	94	98
b. Commend the good features observed	99	94	82	95
c. Point out the weak and the strong points observed	96	91	70	91
d. Make specific criticisms on weaknesses	67	76	52	67
e. Make constructive criticisms of teaching difficulties	98	94	88	95
f. Lead the teacher to recognize her own weaknesses and to seek improvement	99	94	100	97
g. Offer suggestions on the adaptation of the course of study to the individual differences of pupils	98	91	94	95
h. Prescribe remedial procedures for those pupils who need individual attention	93	85	76	88
i. Help the teacher to economize time and energy in her work	96	88	71	90
j. Assist the new teacher to orient herself	96	94	88	94
k. Formulate criteria to direct the teacher's observation of a demonstration lesson or classroom visitation	77	79	82	79
l. Discuss the teacher's report on her observation of a demonstration lesson or classroom visit	71	65	71	70
m. Assist and encourage teachers to investigate and experiment with new methods or teaching materials	96	74	94	90
n. Encourage and inspire the teacher	98	97	100	97
8. Through supervisory visitation				
a. Make self-preparation for supervisory visits	100	100	100	100
b. Make supervisory visits				
(1) According to schedule	38	28	50	36
(2) Unscheduled	72	67	44	66

TABLE I (*Concluded*)

Activities	Percentage of			
	1	2	3	4
(3) On call	96	79	94	90
(4) Announced	75	69	80	74
(5) Unannounced	71	71	53	68
c. Analyze the classroom situation and diagnose teaching difficulties	99	94	100	97
d. Make an objective record of the activities observed in teacher and pupils with comments on the same	50	71	81	61
e. Inform teachers of observations and comments noted through				
(1) a duplicate record	23	22	44	25
(2) an individual conference	94	79	100	91
9. Through demonstration teaching				
a. Teach demonstration lessons to illustrate specific teaching techniques	68	68	35	63
b. Arrange for demonstration lessons to be taught by teachers	88	85	88	87
c. Supervise the lesson planning of the demonstration teacher	71	62	76	69
d. Arrange a subsequent conference for those participating in the demonstration lesson	85	85	82	85
10. Approve or oversee the making of the daily classroom schedules	36	50	24	38
11. Assist in the grading and promoting of pupils	34	32	18	31
VIII. Plan Supervision				
1. Develop coöperatively a philosophy of supervision	97	82	100	93
2. List the specific objectives of the supervisory program for a given period	83	74	88	80
3. Prepare a definite schedule which indicates the specific use of the various supervisorial agencies in achieving the objectives	63	44	82	61
4. Select the criteria or tests to be used in measuring the progress of the supervisory program	80	68	100	79
5. Provide each teacher with a bulletin of the supervisory program in detail	60	41	76	56
6. Discuss with the teachers the supervisory plans and keep them informed of the progress of the same	80	64	94	77
7. Plan for a continuous analysis of supervisory needs	89	79	100	88
IX. Carry on Research and Experimentation				
1. Organize experiments to determine the relative value of different methods of teaching	79	53	82	72
2. Conduct experiments to determine the relative worth of instructional materials and aids, such as handwriting scales, moving pictures, group projects, etc.	72	56	82	69
3. Make investigations and experimental changes in such schools and grades as the best interest of the school demands	81	79	88	81
4. Issue reports on investigations and experiments being carried on within the system	68	56	71	65
5. Construct and standardize tests	29	21	25	26
6. Evaluate supervisorial agencies employed, such as "the individual conference," "visiting plans," etc.	64	59	88	66

which pertain to supervision disclosed a total of nine classes of duties involving 123 specific activities which have been or should be considered as belonging to the general elementary supervisor. The nine duties are: to plan supervision, improve the technique of teaching, improve teachers in service, construct and revise the curriculum, carry on research and experimentation, perform administrative duties, perform professional duties, render community service, and perform clerical duties.

In the preparation of the check list, each category of activities was defined carefully and the definitions were then printed on the check lists as sub-titles to their respective categorical headings.

A composite tabulation of the ratings of the entire group of judges on each item of the check list reveals that more than 90 per cent of the jury would make the elementary supervisor of instruction responsible for all of the activities relating to "constructing and revising the curriculum" and "planning supervision," while less than 80 per cent of the judges recognize this officer as responsible for the activities relating to "performing clerical duties." Again, it may be pointed out that ninety-three, or 75.6 per cent, of the 123 activities are rated as belonging to the general supervisor of elementary instruction by more than 90 per cent of the jury, and that all of the activities but one, viz., "construct and standardize tests," are thus rated by more than 60 per cent of the jury. Adopting a majority agreement of the jury as a criterion, it may be assumed that every activity in each of the nine categories becomes a responsibility of the general supervisor of elementary instruction in city school systems when conditions warrant its performance.

The accompanying table shows the percentage of elementary supervisors, superintendents, educational specialists, and the whole jury who rated each of the items of the check list as of major importance to the general supervisors of elementary instruction. An analysis of the "importance" ratings of the check list of supervisory activities reveals many interesting facts. A few of the most significant findings are as follows:

One hundred three, or 84 per cent, of the activities of the check list are given a majority approval by the accredited jury as of "major importance" to the general elementary supervisor. However, only three of the activities are given a "major importance" rating by 100 per cent of the judges. These are: (1) keep in touch with the latest developments in the field of education; (2) make self-preparation for group conferences; and (3) make self-preparation for supervisory visits.

The "importance" ratings of the specific activities of the check list by the three jury groups—general elementary supervisors, superintendents, and educational specialists—are in marked agreement. Accepting a majority agreement as a criterion, there are only 15 of the 123 activities on which the three groups are not in accord in ratings either as of major or of minor importance. These are:

Arrange for inspirational lectures by educational experts
Visit classrooms for the purpose of cultivating friendly relationships
Recommend the transfer of teachers
Participate in community organizations
Inspect and make recommendations concerning the physical equipment of classrooms
Exhibit specimens of classroom work
Administer objective tests
  (a) To diagnose pupils' difficulties
  (b) To classify pupils
  (c) To measure the growth of pupils
Tabulate and interpret the results of standard tests
Arrange for an exchange of visits between teachers of consecutive grades

Make supervisory visits—unscheduled
Teach demonstration lessons
Prepare a definite schedule of supervisory agencies to be used
Provide each teacher with a detailed supervisory program.

According to more than 50 per cent of the accredited jury, "performing clerical duties" is not recognized as a major responsibility of the general elementary supervisor.

STATE SUPERVISION OF RURAL SCHOOLS

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FUNCTIONS OF STATE DEPARTMENTS OF EDUCATION

It is generally conceded that the chief function of the State Department of Education is *leadership in public education.* Out of this major function grow the following subordinate functions:

1. On the basis of general aims of education and a knowledge of educational needs in the state, it is the function of the State Department to set up educational objectives for the state as a whole.

2. The State Department of Education should provide a personnel able to serve as expert advisers to boards of education, superintendents, and supervisors in local school systems.

3. The State Department should exercise its leadership function in construction and revision of curriculums and courses of study for the public schools.

4. Standards for evaluating the achievement in the public schools should be established under the leadership of the State Department of Education.

5. The State Department of Education should lead in the advancement of teacher training and should coöperate with teacher-training institutions to that end.

6. The staff of the State Department of Education should lead in the discovery of new methods and procedures in administration and instruction and in adapting such to the needs of school systems.

7. The State Department should lead in coördinating the public elementary school with the public high school and the public high school with institutions of higher learning to the end that the total program in the tax-supported schools may be unified and articulated.

How state departments should perform these functions will depend upon the service conception of the policy maker, the Superintendent of Public Instruction. One point of view might justify the maintenance of a staff of experts who wait at desks in the State Capitol until a call for service comes from some local school administrator in distress. Another point of view might call for a corps of individuals trained for specific tasks, who spend their time in collecting and organizing information in the various fields of public education to be used as a basis of planning, in coöperation with local school administrators, programs for the effective organization and administration of schools. The first point of view calls for a staff of "relief workers" and "trouble shooters" when

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trouble brews and the "wires are down" in local communities. The second point of view calls for a trained "construction crew" who prosecute a positive program.

The second point of view may be chosen as the better. The progressive school leader who directs the State's program of education is interested in procuring positive leaders trained in the various fields of public school service who plan their activities on the basis of accurate information. It is difficult to procure and retain a group of such leaders. Customs of long standing and the avarice of selfish politicians combine to hamper steady progress. This, with the legislature's attempt to meddle with organization and curriculum problems, interferes with the freedom of leadership.

It is difficult to get away from a limited amount of "relief" work. Local school officers get into difficulties frequently and the State Department must always be ready to answer trouble calls. As the tendency toward state support and control of education progresses, state departments of education will become more sensitive to movements in local school systems. The "relief" calls will, however, become less as the state's positive program increases. In order that construction and relief activities may properly articulate, the entire program of the state should be built on a careful collection of facts. It means that definite objectives must be adopted and that such objectives must include problems of relief and construction properly fused.

NUMBER OF STAFF MEMBERS

If the educational program of the state is centralized in the State Department of Education, it is necessary to have a sufficient number of employees to keep in touch with educational activities. If the burden of directing the program is placed on local organizations, a smaller number of employees will be needed. The tendency for the past thirty years has been to place more duties on the State Department of Education.

In 1890 there were only 129 persons employed in all the state departments of education in the United States, but in 1925 the number had increased to 1890, or a median of 23 persons per state department.[1] Another measure of the size of state department staffs is the ratio between the staff members and the number of pupils enrolled. In 1925 Nevada had one staff member in the State Department of Education for every 1,200 pupils enrolled in school, while Georgia had 36,221 pupils for each staff member. The median enrollment per staff member in all the states was approximately 12,000.[2]

PERSONS EMPLOYED BY STATE FOR RENDERING SERVICES TO RURAL SCHOOLS

In the fall of 1930, a study was made in order to determine the status of service rendered rural schools by staff members in state departments of education. Out of the 39 states answering the inquiry, 25 were found to have well-defined groups of workers who rendered services to rural schools, while 14 states render service to all schools regardless of whether they are rural or urban. The 25 states employ 174 persons as general supervisors and 14 of these 25 employ 56 special supervisors. There are a total of 230 full-time supervisors and 99 part-time supervisors employed full time in 25 states having rural workers in a well-defined group (Table I).

[1] Schrammel, H. E., *The Organization of State Departments of Education.* Ohio State University Press, 1926, p. 49.
[2] Schrammel, H. E., *op. cit.*, p. 60.

TABLE I

SUPERVISORS EMPLOYED IN 25 STATES THAT HAVE WELL-DEFINED RURAL EDUCATION DIVISIONS

Supervisor	No. States	No. Persons
Full-time general supervisors	25	174
Full-time special supervisors	14	56
Part-time general supervisors	11	45
Part-time special supervisors	9	54

The Kentucky State Department of Education employs two rural elementary supervisors and a rural school agent especially charged with the supervision of negro schools.

Fourteen states have provided for services to rural schools without having a division of rural education. Four of these states employ 45 full-time general supervisors and five employ 17 supervisors who render service to rural schools. At the same time 12 of the 14 states employ 84 part-time general supervisors and five employ 40 special part-time supervisors who render service to rural schools (Table II). This makes a total of 62 full-time and 124 part-time rural supervisors employed by states in which there is no division of rural education.

TABLE II

SUPERVISORS EMPLOYED IN 14 STATES THAT DO NOT HAVE A WELL-DEFINED DIVISION OF RURAL EDUCATION

Supervisors	No. States	No. Persons
Full-time general supervisors	4	45
Full-time special supervisors	5	17
Part-time general supervisors	12	84
Part-time special supervisors	5	40

AGENCIES THROUGH WHICH SERVICES ARE RENDERED RURAL SCHOOLS BY GENERAL AND SPECIAL SUPERVISORS OF RURAL SCHOOLS

Each state department of education employs different devices for rendering services. Some devices are used generally by all the states with varying frequency. In order to discover to what extent states used supervisory devices, a check list was sent all the states with the request that the words *frequently, occasionally, rarely,* and *never* be used in describing the degree to which a given device was used. If a device was used frequently it was checked *F*, if occasionally, it was checked *O*, if rarely it was checked *R*, and if the device was never used it was checked *N*. Table III gives in summary form the result of this study.

Personal Visits to Supervisory and Administrative Officers. Visits to local supervisory officers is the most frequent method used by state supervisors to render assistance. Twenty-five states use this method frequently and four use it occasionally. One state makes such visits annually, two twice each year, and one state makes such visits three times each year. In some states definite programs are adopted and visits to local school officers are made in order that help may be rendered in carrying out such program. In other instances such visits are made in answer to a call for help in the solution of some problem.

Group Conferences with Local School Officers. All states hold group conferences in which local and state school supervisors participate. Twenty-one states hold such conferences frequently, seven hold them oc-

TABLE III

AGENCIES FOR RENDERING SERVICE TO RURAL SCHOOLS

Device	Frequency							
	F	O	R	N	An	2 An	3 An	Mo
1. Personal visits to individual supervisory and administrative officers	25	4	..	..	1	2	1	..
2. Group conferences with local supervisory and administrative officers	21	7	2	..	2	..	1	..
3. State-wide convention of supervisory and administrative officers	2	12	1	..	10	..	..	..
4. District and regional conferences with supervisory and administrative officers	6	10	4	3	7	2	..	1
5. County teachers' conferences and institutes	14	9	2	1	4	3	..	..
6. County normal schools and training groups	6	2	3	19	3	..	..	..
7. Conferences with teacher-training faculties	8	10	8	4	3	..	..	..
8. Community group conferences	11	14	5	3	..	..	..	..
9. Curriculum committees	10	16	3	4	..	..	..	..
10. Circular letters	24	7	1	1	..	..	..	..
11. Mimeographed outlines to persons in service	15	11	5	2	..	..	..	..
12. Making local school and community surveys	11	17	3	1	1	..	..	..

Note: F = Frequently
O = Occasionally
R = Rarely
N = Never

An = Annually
2 An = Twice a year
3 An = Three times a year
Mo = Monthly

casionally, one rarely, two hold them annually and one holds them three times a year. Such conferences serve to crystallize programs of peculiar interest to localities. In such groups special problems are taken up, such as budgeting, purchasing supplies, organization, curriculum, teaching personnel.

Groups of county superintendents are called together to discuss the status of a particular phase of education in rural areas and project a program of improvement. Groups of principals are called together to plan the program of high school adjustment. City superintendents meet to discuss problems of teacher employment and promotion. In most cases groups are small enough that each member feels free to express himself and advance his own point of view.

County Conferences and Teachers' Institutes. When normal schools came into ex-

istence as the training agencies, the institute as such began to disappear. Its place was taken by county conferences of one or two days. The county conference is generally used for the purpose of organizing the school program for the year. State supervisors help local superintendents in such activities. Fourteen states assist local superintendents frequently in these conferences, nine do such work occasionally, two states help in these conferences rarely, four meet with teachers' conferences annually, three twice a year, and only one state fails to use the teachers' conference as an agency for assisting the superintendent.

Community Group Conferences. State supervisors of rural schools come in contact with community groups. In eleven states these contacts are frequent, in fourteen they are occasional, and in five states such meetings are held rarely. In three states there are no meetings with community groups. Conferences with community groups are necessary in promoting programs of consolidation and transportation. Many contacts are made with business men's clubs and parent-teacher associations. Such meetings with the laymen help to develop a cordial relation between school and public.

Curriculum Committees. Curriculums and courses of study are the problems of rural school supervisors. The rural supervisors take a leading part in course-of-study writing. The work of course-of-study making is in the hands of curriculum committees selected from the school service. In ten states contacts are made with curriculum committees by state supervisors frequently, sixteen make such contacts occasionally, three make this contact rarely, and in four states the supervisors make no such contacts.

Circular Letters. In all the states except one, circular letters are used as agencies of contact with the local administrative officers. In twenty-four states circular letters are sent frequently and in seven states

TABLE IV

PROBLEMS CONCERNING WHICH ASSISTANCE IS RENDERED BY STATE SUPERVISORS

Problems	Frequency			
	F	O	R	N
Consolidation	24	4	3	1
Transportation	16	10	5	1
Planning building	22	6	1	2
Teaching methods	22	6	3	1
Rating teachers	9	5	9	8
Selecting teachers	2	8	9	10
Young teachers	10	7	6	3
Developing leadership	13	6	3	3
Making budgets	5	10	8	6
Salary schedules	8	8	8	4
School accounting	7	10	8	3
Office administration	6	12	7	3
School equipment	22	8	1	..
Classroom visits	20	7	3	1
Extra-class activities	5	13	8	3
Standard tests	11	10	6	1
Scoring plants	13	11	3	2
In-service training	18	8	3	..
Professional growth	18	9	1	..
Attendance	10	8	8	3
Colored schools	11	1	1	9
Water supply	13	8	5	2
Health education	21	5	4	1
Length of term	9	7	4	6
Office assistance	2	9	7	3
Community officer	11	8	6	2
Trustee	9	9	7	3
Board problems	13	9	6	1
Special education	12	7	6	2
Adult education	10	9	4	4

Note: F = Frequently
O = Occasionally
R = Rarely
N = Never

such contacts are occasional. The frequency of circular letters depends upon the nature and extent of the activities of the State Department of Education.

Mimeographed Outlines to Persons in Service. In all the thirty-three states reporting except two, mimeographed outlines are prepared and mailed to people in service. These outlines deal with problems of the principals, superintendents, and supervisors. Fifteen states use this method of contact frequently, eleven use it occasionally, and five rarely.

Local School Surveys. In thirty-two of the thirty-three states reporting, rural supervisors rendered service to local school administrators by means of school surveys. In eleven states this method of service is frequently used, while in seventeen states it is an annual affair. The survey may cover such phases of the school's program as building facilities, pupil attendance, pupil achievement, teacher personnel, financial ability, etc. In some instances comprehensive surveys are made as a basis for projecting an educational program.

In summarizing the agencies through which rural supervisors render services to local communities it may be observed that the following means are used: visits, group conferences, conventions, institutes, circular letters, mimeographed outlines, and local surveys, and the following persons and groups are involved: administrators, supervisors, principals, teachers, teacher-training faculties, training groups, business clubs, parent-teacher associations, and boards of education.

PROBLEMS OF LOCAL SCHOOL ADMINISTRATORS CONCERNING WHICH STATE SUPERVISORS RENDER ASSISTANCE

Table IV is a summary of a study which undertook to find out what problems were met by local school administrative officers and to what extent state supervisors gave assistance in their solution. It should be understood that state supervisors do not have direct control or original responsibility in meeting these problems but that they assist the local school people in solving them effectively.

An examination of this table will show that consolidation, planning buildings, teaching methods, school equipment, and health education are problems on which the local school officers need help frequently.

THE MEASUREMENT OF ACCURACY OF JUDGMENTS OF THE DIFFICULTY OF ARITHMETIC PROBLEMS

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Several years ago Thorndike made a study[1] to determine the extent to which ranking by judges of tasks according to their difficulty corresponds to their ranking on the basis of percentages of a group who fail on the several tasks. He had forty teachers rank one hundred tasks according to difficulty. About two thousand ninth grade pupils were then tested on these same one hundred tasks. The subjective ratings and objective per cents of failure were then transmuted into rank orders. A correlation of .88 was found between the rank orders, indicating a high degree of agreement between the ranking of difficulty of tasks by opinion and a ranking based on per cent of error or difficulty. In that study no attempt was made to measure the extent to which judgments of difficulty deviated from known ratings. This is an important factor, since relative rankings may correlate quite closely, while there may be large differences in actual estimates of difficulty.

In this article are reported the results of an investigation to determine the reliability of judgments of ratings of a group of problems of known difficulty arranged in random order on the basis of a problem scale containing arithmetic problems of known difficulty. The method of rating is similar to that used in rating composition specimens by means of a composition scale. A comparison of the estimated ratings and true ratings experimentally established makes it possible to state quantitatively the degree of accuracy of estimate by various judges.

The importance of the findings of this investigation lies in the fact that out of them might come the production of a simple but reliable technic for evaluating the difficulty of problems in arithmetic textbooks.

It was decided to take problems from those standardized as the basis for the Brueckner-Van Wagenen Problem Scales.[2] Two scales were produced from these problems of known difficulty, a two-point scale of thirty-four problems and a four-point scale of seventeen problems. This was done in order to determine to what extent a person differed in his ratings of a problem in using two scales which differed in the size of the interval on the scales (see Scale One).

Next, a set of thirty-four problems to be judged as to difficulty by several groups of persons was selected. These problems were of known difficulty and were a part of the

[1] Thorndike, Edward L., Bergman, Elsie O., and Cobb, Margaret V., "The Selection of Tasks of Equal Difficulty by a Consensus of Opinion." *Journal of Educational Research*, 9: 133-139.
[2] Brueckner, Leo J., and Van Wagenen, M. J., *Unit Scales of Attainment in Arithmetic Problem Solving*. Educational Test Bureau, Minneapolis, Minnesota.

TABLE I

COMPOSITION OF GROUPS PARTICIPATING IN THE INVESTIGATION

Group	Number in Group	Classification	Time Interval
I	25	Supervisors University of Minnesota	One week
II	20	Arithmetic Methods University of Minnesota	Three days
III	27	Arithmetic Methods Mankato Teachers College	Two days
IV	12	Student Teachers St. Peter High School Training Department	One day
V	31	Secondary Education (Seniors) Gustavus Adolphus College	Two days

material used to produce the Brueckner-Van Wagenen Problem Scales, none of which appeared in the two scales produced from the same material. These thirty-four problems were arranged in random order (see Set 2).

Five groups of individuals were selected to judge the difficulty of the problems. One group consisted of supervisors of arithmetic; one, arithmetic teachers; and three, teachers-in-training. One group of the teachers-in-training had no special interest in arithmetic. This group was used in order to find out to what extent lack of training in arithmetic would affect the rating of the problems. The individuals in all groups were asked to assign values to the group of thirty-four problems, first by using the two-point scale as a guide and, after an interval of several days, by using the four-point scale.

The composition of these groups, none of whom had had previous experience in rating arithmetic problems, is given in Table I.

PROBLEM SCALE ONE

TWO POINTS DIFFERENCE

Value	
* 85	Each of three has 4 dolls. How many dolls have they in all?
* 87	What is the sum of 4 and 5?
* 89	If cream costs 24 cents a quart, what must Mrs. Smith pay for 4 quarts?
91	Harry had 137 marbles in all. 94 of them were small. How many of them were large?
* 93	How much less than a quarter is 18 cents?
95	What is the difference between 4 and 9?
* 97	Grace's new coat cost $8.56, her shoes cost $4.95, and her hat $3.67. How much did they all cost?
99	Fred has 65 chickens and Will 124. How many more chickens than Fred has Will?
*101	Helen's journey was 2500 miles in all. After she had gone 1869 miles, how much farther had she to travel?
103	It took a railroad train 12 hours to make a trip of 372 miles. What was the average speed of the train an hour?

* Starred problems only were used in the four-point scale.

*105 Harry's father drove 160 miles in his automobile in 5 hours. How many miles was this an hour?

107 If silk is marked at $2.96 a yard, how much must you pay for ¼ yard?

*109 Farmer Jackson received $42.75 for 9 barrels of apples. What did he receive a barrel for the apples?

111 Find the cost of 50 boxes at $8 a hundred.

*113 How many pint bottles can you fill from a gallon?

115 At 2 for 5 cents, find the cost of 8 cakes.

*117 A lady bought 4⅓ yards of calico at 15 cents a yard for a dress, and other material costing $.75. Find the total cost.

119 Find the number of fence posts 6½ feet long that can be cut from a tree 26 feet long.

*121 During the first five weeks of school the deposits in the school savings bank were as follows: $8.75, $9.68, $10.25, $16.78, $25.44. Find the average weekly deposit.

123 Find the average weight of three chickens, one weighing 3.6 pounds, one weighing 3.75 pounds, and one weighing 4.125 pounds.

*125 Tom has 37 problems correct on the 4 tests he wrote this month. What was the average number he had correct?

127 On Monday, the Smiths motored 289 miles, on Tuesday 265 miles, on Wednesday 327 miles, and on Thursday 278 miles. How far did they travel on the average each of the four days?

*129 How many minutes is it from 3:45 A.M. to 5:15 A.M.?

131 What is the volume of a 4-inch cube?

*133 The Senators won 65% of the 80 games they had played. How many games had they lost?

135 A gallon of water weighs about 8⅓ pounds. Find the weight of a pint.

*137 In a certain city gasoline sold for 20 cents a gallon, or $8.50 for a card which entitled the owner to 50 gallons. How much was saved a gallon by buying a card?

139 A flatiron uses .5 kilowatts an hour. A vacuum cleaner uses .135 kilowatts an hour. How much more electricity is needed to run a flatiron for 5 hours than for a vacuum cleaner?

*141 Mr. Wollings earns $2,400 a year. His rent is $45 a month. What per cent of his income does he spend for rent?

143 A passenger train traveled 45 miles in 1 hour, 15 minutes. How many miles a minute was this?

*145 The tax rate in our city in a recent year was $.062. If Mr. A's property was valued at $8,500 and was assessed at 50% of its value, what were his taxes?

147 The list price of a hat was $8. What was the net price, if the discount was 15% and 5%?

*149 A grocer paid a farmer $1 a bushel for potatoes and sold them for $1.25 a bushel. What per cent of the selling price was the margin?

151 A commission merchant sells for a grower 2,000 bushels of potatoes at $1.50 a bushel. Freight charges and drayage are $165. What amount should he remit to the grower if his commission is 2½%?

After these persons had rated the difficulty of the problems by both scales, the next step was to compare these assigned ratings with the true ratings based on the results of tests given to large numbers of children. These ratings are expressed in tenths of P. E. (Probable Error) units. It is estimated that the P. E. of the scales themselves is two points. The procedure used is illustrated in detail on the specimen set of problems on pages 341-342. The column headed "Estimated Value" gives the ratings by one judge. The next column gives the true values. The column headed "Difference" gives the difference between the estimated and true values for each problem. Minus values are given to all differences in which the true rating was lower than the estimated rating. At the

SET 2—PROBLEMS OF KNOWN DIFFICULTY ARRANGED IN RANDOM ORDER

Name ..... Year ..... Total Experience .....

Years' experience teaching arithmetic .....

Write your estimated scale value for each problem under column headed "Estimated Value." Disregard columns headed "True Value" and "Difference."

	Est'd Value	True Value	Diff.
1. How much money does Arthur need to buy 4 apples at 8 cents each?	85	85	0
2. Donald needs 9 boards, each 2¼ feet long, for the floor and sides of a cage. How many of these can he cut from a 9-foot board?	119	123	4
3. How long will it take an automobile to travel 225 miles at the rate of 25 miles an hour?	105	109	4
4. Mary's mother bought 6 yards of cloth at 45¢ a yard for two dresses for Mary. Find the cost of the cloth for one dress	110	121	11
5. A boy rode 12.5 miles on his bicycle on Monday, 0.6 of a mile on Tuesday, and 15.0 miles on Wednesday. How far did he ride in the three days?	123	113	−10
6. If 17 acres of land produce 442 bushels of grain, what is the average value of the yield an acre at $1.40 a bushel?	128	129	1
7. A man borrowed $1,000. At the end of a year he repaid the principal with interest. If he paid $1,055, what was the rate of interest?	141	147	6
8. How many minutes is it from 8:15 to 9:40?	129	125	−4
9. Mr. Jones borrowed $800 at 6% interest. He paid back the loan with interest at the end of six months. What was the amount paid?	140	141	1
10. In the first grade there were 46 pupils, in the second grade 41 pupils, and in the third grade 40 pupils. How many pupils were there in all, in these three grades?	96	89	−7
11. Find the volume of a trunk, 3½ feet by 2½ feet by 2⅓ feet	131	127	−4
12. An orchard had 160 trees. There were 5 equal rows of trees. How many trees were there in each row?	104	101	−3
13. Find the date of maturity of a 90-day note dated March 4, 1930	128	149	21
14. Ruth's new coat cost $7.35, her shoes cost $3.95, and her hat $2.49. How much did they all cost?	97	97	0
15. On a stormy day only 25 children out of a class of 40 were at school. What per cent of the children were present?	140	131	−9
16. Tom works from 4 o'clock to 7 o'clock every afternoon. He receives 25¢ an hour for his work. How much does he earn each day?	106	103	−3
17. At 2 for 5 cents, how much do 16 papers cost?	116	115	−1
18. How much less than the whole is 15% of a number?	132	133	1
19. When school began one morning, there were 5 pupils in each of six rows of seats. Three pupils came in later. How many pupils were in school that morning?	102	105	3
20. Mr. Winton owns a house and lot assessed at a valuation of $9,200. His taxes on this property are $180. What is the rate at which the property is taxed?	145	151	6

SET 2—PROBLEMS OF KNOWN DIFFICULTY ARRANGED IN RANDOM ORDER (*Continued*)

	Est'd Value	True Value	Diff.
21. Allowing 1¼ cubic feet to a bushel, how many bushels of potatoes can be stored in a bin 8 feet by 6 feet by 10 feet?	136	139	3
22. How much more than 36 is 52?	93	93	0
23. How much money does Arthur need to buy 23 oranges at 3 cents each?	89	95	6
24. In a family budget 20% of a salary of $3,000 is allowed for rent. How much a month is allowed for rent?	133	137	4
25. A grocer bought 80 bushels of potatoes at $1.75 a bushel and sold them at $2.25 a bushel. What was his gross profit on the 80 bushels?	136	117	−19
26. A utility company pays quarterly dividends of 1¼%. I have 60 shares of this stock, par value being $100. What annual income do I receive?	147	145	−2
27. If a dozen cookies cost 15 cents, how much does one cost?	109	119	10
28. Mr. Smith divided a 7½-acre field into two equal parts. On one part he raised 375 bushels of potatoes. What was the average number of bushels raised on each acre?	138	135	−3
29. Tom's mother invited 44 boys to the party. Only 23 boys came. How many boys did not come?	91	87	−4
30. The four faces of a church spire are triangles. The base of each triangle is 18 feet and the altitude 54 feet. How many square feet of roofing are required for the spire?	137	143	6
31. Ted is 9 years old. His father is 46 years old. In how many years will Ted be as old as his father is now?	99	99	0
32. Alice wished to make 4 May baskets. She needed ½ yard of ribbon for each one. What would the ribbon cost at 15 cents a yard?	108	111	3
33. Jack bought 3 apples for 9 cents. What did he pay for one apple?	90	91	1
34. Mrs. Johnson bought 4 yards of $.47 calico for $.36 a yard. What was her total saving?	108	107	−1

Plus Diff.	91	
Minus Diff.	70	
Net Diff.	21	
Average Net Diff.		.62
Total Diff.	161	
Average Total Diff.		4.73

foot of the list of problems are given data for the totals for this individual similar to those to be reported in the following tables for all judges. First, all plus differences were totaled; then all minus differences were totaled; the sum of these two results gave the "algebraic sum." In this case the algebraic sum was 21, an average of .42 points for each of the 34 problems. The "Arithmetic Difference" is the arithmetic sum of all differences regardless of their signs. In this case the total was 161 points, an average of 4.73 points per problem. The same technique was applied to the ratings based on the two-step and four-step scales.

TABLE II

SUMMARY OF AVERAGE ALGEBRAIC AND AVERAGE ARITHMETIC DIFFERENCES ON THE BASIS OF THE TWO-POINT AND FOUR-POINT SCALES

Average Algebraic Difference

Groups	I	II	III	IV	V	Total
N	25	20	27	12	31	115
Two-point scale—Mean	.48	.20	−.74	−1.25	−.71	−.38
S.D.	1.44	1.21	1.80	2.08	1.95	1.81
Four-point scale—Mean	.96	.50	.89	−.92	.42	.39
S.D.	2.20	1.50	2.75	1.38	2.98	2.62

Average Arithmetic Difference

Two-point scale—Mean	7.10	8.95	8.79	9.33	10.14	8.87
S.D.	1.96	2.22	2.06	.99	1.91	2.21
Four-point scale—Mean	7.50	8.60	8.68	8.08	10.69	8.89
S.D.	2.46	1.60	2.12	.64	1.65	2.24

Table II contains the summary of the findings for the average algebraic differences and the average arithmetic differences for each of the five groups of judges and for all 115 judges on the ratings by the two-point and four-point scales.

The mean of the individual average algebraic differences between estimated and true ratings for the whole group was −.38 points on the two-point scale and .39 points on the four-point scale. This shows that the average error of rating the difficulty of the 34 problems was less than one point by either scale. This surprisingly small net difference indicates a high degree of accuracy of the estimates of the combined groups of judges. There are no striking differences between the five groups, the largest difference on the two-point scale being −1.25 points for Group IV and the smallest, .20 for Group II. The S. D.'s on the two-point scale show that most of the average algebraic differences for individuals in the group were relatively small. The variations were somewhat larger on the four-point scale. The range for all judges on the two-point scale was from 4.5 to −6.5, and on the four-point scale from 12.5 to −5.5, showing that there were some individuals whose estimates of difficulty deviated widely from the true ratings. On the other hand, there were several individuals whose average net differences were zero.

The means of the average arithmetic differences for the entire group were 8.87 on the two-point scale and 8.89 on the four-point scale, approximately the same on both scales. Dr. Van Wagenen estimates that 6 points on the scale represent approximately one school grade. On this basis the average judgments of the groups, when

using the scales, deviated approximately 1.4 grades from the true value. Earlier studies in the field of composition by Hudelson[3] and Van Wagenen[4] show that the degree of error in rating compositions can be considerably reduced by training and experience in rating. It is therefore likely that the average total difference between estimated and true ratings of arithmetic problems can be reduced to less than one grade. No data are available on this point. Again, there are no striking differences in the means from group to group, although some groups are more variable than others. The average arithmetic difference on the two-point scale varied for individuals from 3 points to 14 points and on the four-point scale from 1 point to 14 points.

In the original study it was found that the median of the differences on individual problems, computed algebraically, was 0 for all groups on both the two- and four-point scales, except for Group I, which had a median of 0.6 points on the four-point scale. The median of the differences on individual problems, computed arithmetically, was 6.94 on the two-point scale and 7.41 on the four-point scale. On the two-point scale the median deviations on individual problems ranged from 0 to 28.2 points. For example, the median deviation from the true ratings of problems 9, 14, 17, 28, and 31 was 0 points when the two-point scale was used, while for problem 5 the median deviation was 15.4 points, for problem 13 it was 19.1, and for problem 25 it was −28.2 points.

On the four-point scale the median deviations of judgments on individual problems varied from 0 on problems 9, 11, 14, 22, 26, and 31 to as much as −25.2 on problem 25. An analysis of the problems with extreme deviations showed that no problems of an approximately similar type were found in the scale. Judgments were hence relatively unguided. Other problems, such as, for example, problem 25, which dealt with gross profit, were estimated to be much more difficult than they actually were found to be by test. Reducing the interval in the scale to one point would make it possible to increase the variety of types of problems included and thus probably increase the likelihood of more correct estimates.

These findings agree with Thorndike's[5] conclusion that "such a consensus, even from a thousand experts, will not be trustworthy throughout. It will make blunders, suffer from 'constant errors,' some of them regrettably large. The consensus would, on the other hand, often be near the truth and rarely be greatly in error. There will be a substantial correlation with objectively determined results."

In order to secure a measure of an individual's consistency of scoring, five members of Group I were asked to rate the problems a second time on both the two-point scale and the four-point scale. The time interval that elapsed between the two ratings was three months. The median algebraic and arithmetic differences of the two ratings of individual problems for each of the five judges are given in Table III.

The largest median difference in the two ratings of the problems by the two-point scale was only 1.82 points, algebraically expressed, and −2.00 by the four-point scale, while the largest median difference, ex-

[3] Hudelson, Earl, "Diversity of Judgment upon Standards of Content and Achievement in English." *Teachers College Record*, 27: 33-51.

[4] Van Wagenen, M. J., "The Accuracy with Which English Themes May Be Graded with the Use of English Composition Scales." *School and Society*, 11: 441-450.

[5] Thorndike, E. L., *The Measurement of Intelligence*, pp. 134-159. Bureau of Publications, Teachers College, Columbia University.

TABLE III

DIFFERENCES IN THE RATINGS OF DIFFICULTY OF PROBLEMS ON TWO SUCCESSIVE TRIALS BY FIVE JUDGES (MEDIANS)

Judge	A	B	C	D	E	Total
Two-point scale—Algebraic	−1.25	0	−.62	.71	1.82	0
Arithmetic	2.69	1.50	4.33	5.00	4.12	4.51
Four-point scale—Algebraic	0	0	0	−2.00	0	0
Arithmetic	3.75	2.50	5.00	5.10	3.44	4.07

pressed arithmetically, was 5.00 points by the two-point scale and 5.10 points by the four-point scale. The estimate of this combined group of five judges was as accurate as for the entire group. There was some difference in the accuracy of the individual judges; however, in no case was the greatest difference between judges more than three-fifths of a grade. Judge B was highly consistent while Judge D had the widest deviation, measured arithmetically.

IMPLICATIONS

It will be recalled that the probable error of the scales used in the investigation was about two points, while the median deviation of the judgments of the individuals who participated in the investigation was about six points, or three times greater. This would lead one to believe that the method of testing children to determine the difficulty of problems would be more reliable than that of having individuals judge the difficulty of the problems. However, when one considers that some individuals can estimate the difficulty of problems with a probable error of less than two points, as has been shown in this study, one doubts whether the tedious process of testing children to determine the difficulty of problems is more reliable than the technic of having reliable judges estimate the difficulty of problems by means of a scale consisting of problems of known difficulty. The technique herein described could be used to select judges who can accurately estimate the difficulty of problems on the basis of a standard scale.

It has been found through actual trial that the average difference between the rating of fifty problems in a typical fifth grade arithmetic textbook by three judges was less than three points. It would therefore seem to be a feasible plan to rate the difficulty of problems in several arithmetics by means of the plan previously described and thus to make comparisons between the relative difficulty of problems in the several books possible.

It would be interesting to apply a similar technique to the rating of reading materials.

SUPERVISORY PROBLEMS IN THE ORGANIZATION OF A SCHOOL ON THE COÖPERATIVE GROUP PLAN[1]

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The chairman assigned to me as a subject, "Supervisory Problems in the Organization of a School on the Coöperative Group Plan." This topic was acceptable, but when I got at the task it seemed clear to me that the supervisory features of the coöperative plan are so interwoven with its administrative set-up that a clear picture of one cannot be given without discussing the other. That has been my procedure in this paper and I hope you will agree that it is sound.

Within the last month the *New York Times* published a letter from a correspondent in Arkansas whose opening sentence read as follows: "In her current dilemma of school maintenance, Arkansas is turning to the old one-room school as a basis for educational hope. For now, owing to the depression, the consolidated country schools conceived by outlander pedagogues and architects are apparently headed for the discard. Witnessing Arkansas's long and grand scramble for plain and fancy education, to see the one-room school emerge at the top, the correspondent feels the urge to rise up, toss his hat high and shout for joy."

There may be some in my hearing who would sympathize with this point of view, but I suspect the majority would not, nor would the educators of the country at large. They would say, would they not, "The one-room school has its virtues but it has too many handicaps to be on the top of the educational system of any state."

Yet most of our elementary schools today, be they rural, consolidated, or urban, are one-room in spirit and even in organization. Let me make myself clear. When the children from the kindergarten to grades six or eight come to school in the morning of any day, no matter what size the school, they may mingle on the playground for a few moments and then they go on in for the day's work. Passing through the halls, they go to their separate classrooms and teachers. In the main the pupils of one class do not see those of another class again until recess or at an occasional assembly. The one big community affair in many a school is the fire drill once or twice a month. The average elementary school is then made up of a group of one-room schools with one, two, or three grades in it, consolidated on the outside by the playground and on the inside by the roof only. A cluster of little educational shops with one saleslady in each; the same customers for a year, unable to buy at any of the other shops or even look in at the windows.

The elementary school has been subject to constant moulding as to goals and methods, but in the main it has kept its Lancastrian organization, started over a century ago when education consisted of the three R's. If this is true, it would be surprising if its set-up were well adapted for today. The high school never accepted the Lancastrian one-room, one-teacher ideal and the twentieth century junior high

[1] A paper read at the meeting of the National Education Association in Atlantic City, June, 1932.

school was organized on the other basis from the start.

It is true that in the elementary school the platoon organization has made large inroads into the old form of organization, but its mechanical difficulties and the emphasis on the over-loaded building have been looked upon with disfavor by many. Some have felt that the mechanism of the platoon school has been more stressed than its vital education.

Then, too, the proponents of such modern conceptions as the project and the unit of work have stated that the one-room, one-teacher organization was a more favorable set-up for the unity of subject matter than any departmentalization. For, say the advocates of the new education, "'new wine in old bottles'; if you divide the school activities among two, three, four, or five teachers, the division must be on subject matter and that is uneducational. We have seen it in the higher schools and it isn't good for little children."

Of course thousands of schools have had division of labor among the teachers of the elementary school. Music and art have been especially favored for this, because many teachers feel they have had poor training and have meager gifts for these so-called special subjects. No one has raised the cry, as far as I know, that such departmentalization leads to consequences worse than to be had by keeping a teacher at something she cannot do. Then many schools have developed informal platoons which have largely discarded the heavy machinery of the so-called platoon organization and thereby they have disarmed some of the critics of the general scheme.

Only in the last few years, however, has the idea been given importance and publicity, that the best form of organization in the elementary school is not the Hartwell or Gary platoon, nor is it the traditional Lancastrian one-room, one-teacher form, but rather the informal coöperation of several teachers—four or five, preferably—working with the same pupils. The elementary schools of the country are indebted to Doctor James F. Hosic for giving direction, balance, and publicity to this movement.

We read in our yearbooks that supervision should be coöperative, democratic, philosophic, creative, scientific, and effective. I wish to relate to you a personal experience in supervision which I hope measures up to some of these standards. There is nothing exceptional about the story unless it be that it is true.

It was my privilege to be principal of an elementary school for several years organized on an informal platoon basis in the upper grades. Five years ago I went to another organization. Situated in the one block was a junior high school building, an elementary building, two gymnasia, two playgrounds, a playroom, and two manual arts buildings.

In the elementary school our first teachers' meetings had to do with aims and outcomes in education to meet the present-day needs. The outcome of the discussion seemed to point the way to a new emphasis upon activity as a basis for learning. It appeared also that the arts, music, assemblies, excursions, and recreation might come to a new place of prominence—on a par possibly even with arithmetic. This setting up and the discussion of aims was supervision philosophic, I hope.

The teachers of grades four, five, and six especially became agitated over the newer aims in education and they held many informal discussions among themselves and with their principal. Finally, as a group they came to me, their principal, for a conference. What they said was something like this: "As a group we will not take second place to any in our desire to do a good job, but our task is too big for

us. We were trained as general practitioners and our experience has been that increasingly we are being asked to be expert in a variety of subject matter, which has now reached fifteen." (One teacher of sixty years said she was finding it difficult to demonstrate rhythms to a sixth grade.) Continuing, they said: "You have had experience with another form of elementary school organization; couldn't you lead us in reorganizing our school better to meet the demands of the present day?" This was supervision democratic, was it not? They did not address me as Solomon or Socrates—not as one who knew but as one who might lead.

We therefore arranged to study the problem all through the year. The needs of the school were to be carefully considered; problems peculiar to it sought out and stated; how other schools had met their problems, especially in organization, discovered. After the study the facts were to be carefully weighed, their meaning evaluated, conclusions drawn, and, if need be, something effective done about it. This has some of the elements of scientific procedure, I believe—scientific supervision.

When the discussions began, the kindergarten teacher, like the Plebians of old, asked to become a member of the assembly and here an important step was taken; it was voted that the kindergarten was a part of the school and that the teacher could take part in the assembly. It should be mentioned also that the teachers of Grades 1, 2, and 3 took part in all of the planning, as they never for a moment assumed that the traditional scheme was the last word even in their grades.

Some of the points made for the one-room, one-teacher type were:

1. The dangers of separating the work among several teachers for fear that the emphasis would be upon subject matter instead of upon teaching children
2. The desirability of having children responsible to only one teacher personality —the mother idea
3. The belief that any specialization of subject matter should be additional to the regular program and should be supplied by extra teachers
4. That the unity of school experience could best be obtained by one unifying teacher
5. That if all the activities were centered in one room with one teacher it would be more homelike

The arguments against the traditional one-teacher scheme were:

1. The difficulty the all-around teacher experiences, especially in the upper grades, in trying to teach well the whole curriculum
2. The need of emphasizing such activities as music, art, recreation; and the lack of preparation of most teachers to carry out such a program
3. The right of the child to meet several personalities among the teachers each day, instead of being confined to one teacher and one room
4. The certainty of better equipped and more interesting classrooms by concentrating types of supplies and equipment into classrooms where needed, instead of duplicating everything in each classroom
5. The probability that a school library, better assemblies, and other plans might develop when placed in the hands of teachers through the new grouping of activities
6. The possibility that through the reorganization the school might take on a renewed interest in all forms of progressive education from a new point of view

A part of the investigation included visits to schools of both types—traditional and coöperative. Two of the traditional type schools visited were well known experimental schools in a large city. These schools were situated about five blocks apart.

Some of the teachers in one school were asked if they were interested in the coöp-

erative idea. "No," said one, "we don't believe in separating the work; it is uneducational." Just then she dismissed the class. "Where is the class going?" we asked. "To the music teacher to make musical instruments." "Is it done under your direction?" "No, but it is a part of a central project."

Another class was in the shop with a special teacher; still another was with the science teacher.

The teachers concluded, after their visit, that specialization in the public schools would not come through extra specialists but through the specialization of the regular teacher. The cost would prevent the corps of extra specialists even if the results justified it.

When the facts were in and the meaning interpreted and conclusions drawn, an unusually conservative group of teachers was convinced that a change should be made from the Lancastrian type to some form of coöperation. The teachers of Grades 1, 2, and 3 were as enthusiastic about the change as were the upper grade teachers.

The conclusions centered around the following:

1. Some form of coöperation seems best for the children mentally, physically, and spiritually
2. A change has a good chance to produce more growth
3. A more homelike atmosphere
4. It seems best for the teachers

There was no claim that the reorganization would in itself make a better school, but there was a good chance that it might.

The proposition was presented to the Superintendent of Schools by the principal and he readily gave consent, providing there were to be no requests for additional teachers or new equipment. In other words, we could have it if it cost nothing extra.

The new program called for a teacher of skills in each grade teaching two groups, general teachers of social science and nature, music and physical training, and one for the arts, fine and industrial. One cooperative group for Grades 1, 2, and 3 and one for Grades 4, 5, and 6. The sub-normal classes and the kindergarten were not included. The latter might have been, but another class made the grouping more difficult.

The teachers were assigned after an open and frank discussion of the qualifications of each to do certain types of work. Some had been known for years as having particular skills and interests. These were assigned first and, with surprisingly little trouble, all the jobs were taken. After four years they are doing the same work and are happy in doing it—at least so they say.

One of the most interesting changes which took place was the development of the school library, under the direction of the upper grade teacher of literature and music. An unused classroom was cleared of regular class furniture, shelves were built, and tables and chairs were picked up about the building. Curtains and other bits of color were put up about the room. Teachers were invited to send in their readers—that is, sets not being used. One veteran teacher found she had eighteen sets to contribute. Of course, attractive new books for children of all types will eventually predominate.

The nomination of certain classrooms to be the centers of certain activities naturally caused a decided change in their appearance. The art and science rooms began to resemble work rooms or studios. Maps and pictures and work tables appeared in the social science room; the reading and language rooms developed reading corners and reading circles, along with places to write.

Perhaps I should apologize for detailing these changes in a paper on supervision.

My defense is that I am describing changes which transformed to some extent the thinking of a group of teachers. If education can be evaluated in terms of change in the individual, cannot supervision be rated by the effect upon the teachers?

When the reorganization went into effect in the fall of 1928, the teachers began to plan their work together. Meetings of the groups were called often and units of work outlined. No chairman with authority was elected, as the principal wished to be a member of each group. To be of any value he had to re-read his courses of study and really become familiar with the teachers' problems. The coöperative meetings were hard on the supervisor but thoroughly good for him. Needless to say, these meetings stimulated the teachers to creative industry, research, experimentation, and to call for supervisory assistance. There was nothing done, however, which narrowed the teacher's freedom in the class. Nor was there a lack of slack in which to develop the interests of the pupils. One teacher said that she promoted more excursions in the first year than she had in all of her previous experience.

The plans were outlined for a month in advance, written on cards placed on a special board in the principal's office, where they could be studied by all. Teachers needed to know what their colleagues were doing in order to do a good job themselves. It was necessary for each one to see that her job furthered the plans for the good of all.

If I have given the impression that there is much scientific data in my office to prove that the school is greatly improved, that would be misleading. The art supervisor says our art is better. The music and recreational supervisors say the same. There is objective data to show that our skills are being maintained and that they are still above the level of the city. One teacher has developed from a fair, all-around teacher in the primary grades to a very skilled one in the teaching of reading. Other gains on the part of the teaching could be cited. I think it can be said that in the four years of the experiment many of the teachers have become skilled to the point where they need less general supervision. More and more they know what they need. The general supervisors give much less time to teachers who are working coöperatively.

I believe, however, that there are many classrooms of the one-room, one-teacher type where there may be single activities better than my teachers can offer. There is evidence, however, to show that the general level is better in the coöperative group than with one teacher who tries to do everything.

Perhaps the change which has impressed the teachers most is the improved morale in a school where the teachers are planning together rather than in competition with one another. Where each is assigned to an activity instead of a grade, she feels a friendly responsibility for all the children in the group. This is noticeable in assemblies. It is not uncommon to see all the teachers assisting with costumes and scenery because all have assisted in planning the affair. One doesn't have to guess what effect such coöperation has upon pupils.

As to the effect of the plan upon the pupils, one or two statements may be made:

1. The day made up of several situations and teacher personalities is probably more stimulating.
2. If there is more sustained interest, there is probably more learning.
3. A psychiatrist, after careful examination of the set-up, especially in the primary group, said: "This plan is just what young, growing children need. The child who comes to school at six needs to meet more than one teacher. He needs a system where he will break away from the mother

fixation. In my opinion the one-teacher plan is what most children should not have.

To sum it up, one may say that either type of organization may be good. The coöperative group plan is more of a challenge to the supervisor to keep the machine going well. The machine is more complicated than the one-teacher scheme, as the automobile is more complicated than the wheelbarrow. The supervisor is the service manager in the greatest of all going machines, the public school; under the coöperative group plan the supervisor can make his school a great democratic institution, well suited to the demands of the new day.

THE STATUS OF RURAL SUPERVISORS OF INSTRUCTION IN THE UNITED STATES[1]

VI — The Nature and Number of Requests for Supervision

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Good supervisors welcome requests for assistance quite as much as good teachers welcome similar requests from sincere pupils. Both supervisors and teachers desire to be helpful. In order to get a more comprehensive view of this aspect of rural supervision, the supervisors were asked to record the percentage of teachers requesting supervisory aid at various intervals and also to state the nature of their requests. The result is given in Table I. The data in this table are necessarily somewhat incomplete, representing replies from 213 white supervisors and 64 colored supervisors of the 400 supervisors studied. However, these data show that there is a general tendency for rural teachers to request supervisory assistance. This has long been projected as an ideal in supervision, the general assumption being that the ideal situation is one in which every teacher will call for supervisory assistance as difficult problems arise. The situation with regard to rural supervisors is far from ideal, as is indicated in Table I, because a large number of rural teachers do not request supervisory aid at all. But, obviously, teachers are beginning to feel the need for supervision and many are becoming trained to the point where they expect it. Therefore, it seems reasonable to predict that the percentage of teachers requesting supervision will continue to increase in rural school systems.

The nature of the requests from teachers asking for supervisory aid is indicated in Table II. The data are complete, representing replies from 400 supervisors. Requests for aid in teaching specific subject matter leads in the list, with 66.2 per cent. It is significant that only 56.9 per cent of the white teachers requested aid in han-

[1] This is the sixth of a series of seven articles on rural supervision, by Professors Moore and Cole.—Editor.

TABLE I

PERCENTAGE OF RURAL TEACHERS REQUESTING SUPERVISORY AID

Number of Supervisors Reporting That Their Teachers Requested Supervision to the Extent Indicated

Per Cent	Weekly		Monthly		Once a Semester		Yearly		Not at All	
	White	Colored	White	Colored	White	Colored	White	Colored	White	Colored
100	2	2	3	5	7	1	11	5		
95–99	1	1	4	5	5		7		2	
90–94			12	3	2	2	4	1	1	
85–89			1	2	1		3	1	1	1
80–84	2		7	2	5	1	2			
75–79		1	14	6	4	2	5	1	1	2
70–74	2		4	3	2		1	1	1	
65–69			1		1					
60–64	1		8	2	4			2		
55–59			2							
50–54	9	5	20	12	16	3	7	5		
45–49	1				1				1	2
40–44	1		5	2	3			1	4	
35–39	1		1	1	5		1		1	
30–34	1	1	9	2	11		7	2		2
25–29	13	5	18	1	18	1	11	1	10	1
20–24	7	6	20	1	12	3	9	2	13	2
15–19	6	1	6		7	4	3	2	3	2
10–14	18	9	8	4	16	4	18	5	16	2
5– 9	22	5	8	2	8		14	3	16	5
1– 4	12	1	6		2	1	5	1	22	3

dling disciplinary cases, while 86.5 per cent of the colored teachers made such requests. Only 46.8 per cent of the white teachers requested aid in connection with their personal problems, while 84.1 per cent of the colored teachers requested such aid. It is further shown in Table II that a large number of activities the rural supervisor is expected to perform go beyond the mere supervision of instruction. Although no brief is presented here for making the rural supervisor a welfare and community worker, it would seem that an opportunity may be overlooked in failing to develop this phase of the supervisor's work. Of course, if these phases of his work are to be stressed, his load of actual classroom supervision will have to be reduced accordingly, but in the last analysis perhaps they are all educative in character. We cannot overlook the fact that 54.4 per cent of the requests for supervisory assistance involved personal problems of the teacher. The rural teacher, ofttimes away from home and somewhat isolated, needs someone to whom she can tell her troubles—someone who will

TABLE II

NATURE OF TEACHERS' REQUESTS FOR SUPERVISORY ASSISTANCE

Nature of Request	White		Colored		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
How to teach specific subject matter	196	61.6	69	84.1	265	66.2
Where to find suitable subject matter materials	194	61.0	63	76.8	257	64.2
How to handle disciplinary cases	181	56.9	71	86.5	252	63.0
Personal problems	149	46.8	69	84.1	218	54.4
How to arouse interest of community in school	13	4.0	13	15.8	26	6.5
Advice concerning summer school courses and extension courses	22	6.9	2	2.4	24	6.0
How to arrange the daily program	17	5.4	4	4.8	21	5.2
What professional books to read	15	5.4	1	1.2	18	5.0
Aid in the classification of pupils	19	5.4	1	1.2	18	5.0
Aid in selecting supplementary materials and planning supplementary work	16	5.0	1	1.2	17	4.2
Where to get material for public programs sponsored by and given by the school	15	4.7	2	2.4	17	4.2
How to diagnose special pupil difficulties and what remedial measures to use	12	3.7	5	6.0	17	4.2
What kind of school equipment to buy and where to buy it	16	5.0	0	0	16	4.0
How to adjust school program to meet individual differences	16	5.0	0	0	16	4.0
Help in the promotion, retention, and demotion of pupils	12	3.7	1	1.2	13	3.2
How to increase regularity of attendance	4	1.2	7	8.5	11	2.7
Aid in selecting library books	10	3.1	0	0	10	2.5
How to organize a Parent-Teacher Association	7	2.2	3	3.6	10	2.5
How to plan and what to plan for seat work	8	2.5	2	2.4	10	2.5
Requests to speak at P. T. A. meetings and other meetings	9	2.8	0	0	9	2.2
How to improve school buildings and grounds	4	1.2	4	4.8	8	2.0
How to raise money for school	2	.6	6	7.3	8	2.0
Aid in making out lesson plans	7	2.2	0	0	7	1.7
Aid in working out a program for the playground	7	2.2	0	.0	7	1.7
What standardized tests to use and how to use them	6	1.8	1	1.2	7	1.7
How to plan and conduct extra-class activities	7	2.2	0	.0	7	1.7
How to determine the part the school is to play in community activities	7	2.2	0	.0	7	1.7
Aid in the interpretation of the course of study	6	1.8	1	1.2	7	1.7
Where to secure a good boarding place	2	.6	4	4.8	6	1.5
Aid in securing another position	4	1.2	2	2.4	6	1.5

TABLE II (*Concluded*)

Nature of Request	White		Colored		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
How to keep pupils busy and interested	5	1.5	1	1.2	6	1.5
How to deal with parental interference in school affairs	4	1.2	1	1.2	5	1.2
How to organize teachers' club for professional improvement	4	1.2	0	.0	4	1.0
Help in setting up units of work	4	1.2	0	.0	4	1.0
Dealing with school board	4	1.2	0	.0	4	1.0
How to secure better buildings and equipment	1	.3	3	3.6	4	1.0

listen sympathetically and help her solve her difficulties. In the diagnosis and sympathetic solution of such personal problems of the teacher, the supervisor may not only render a very great service to the teacher but at the same time greatly influence the educational development of the community.

The supervisor, therefore, may play a very important part in the solution of personal problems of the teaching staff and the improvement of the social life of the community. The supervisor who renders this type of service most effectively needs to be trained accordingly in mental hygiene, sociology, and allied fields. This training should better enable the supervisor to see the whole personality of the teacher and detect her difficulties. Such training should also enable the supervisor to see the community as a whole and should aid him in working out more efficiently the residual functions of the school in relation to the functions and activities of other community institutions.

COMPARISON OF THREE TYPES OF ORGANIZATION IN THE FIRST AND SECOND GRADES

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In the school system of the Fordson district of the city of Dearborn, there are at the present time three different types of organization of the primary grades, namely: the so-called traditional plan of instruction; the traditional plus remedial plan; the activity or unit plan of instruction. The aim of this study was to find out which of the three plans, if any, is the best.

In order to understand more fully the problem involved, it is essential that a brief description of each of the three plans be given.

The Traditional Plan. We are calling the traditional plan that plan which is probably in vogue in most schools of the country today. The home-room teacher teaches all the subjects, including music, art, and physical education. In the particular school to which I have reference, the only class which the home-room teacher does not conduct is library. In this instance, the children go to the library for one thirty-minute period each week.

The Traditional Plus Remedial Plan. This plan is similar to the traditional plan with the exception that children in need of special help, primarily in reading, are taken from their room and given special help for one period each day. In the particular school to which I have reference, they also have a special teacher for physical education two thirty-minute periods each week and library one thirty-minute period each week.

The Unit or Activity Plan. In this set-up a definite specialized procedure or routine is established. Approximately one hundred children are divided into four groups of about twenty-five each, this grouping being done according to results of various tests, considerations of ages, and teachers' judgment. The groups then comprise four separate abilities on a descending scale, which we may call *A, B, C,* and *D.* The physical makeup of the building is especially designed for this plan, there being situated on either side of one large room (34′ x 22′) two smaller rooms (28′ x 17′). Conveniently placed doors make each room of the suite easily accessible. The large room is called the activity room and the smaller rooms are called the academic rooms. While two groups, *A* and *B,* are together in the activity room, group *C* is in one academic room and group *D* is in the other. They remain in these rooms until recess time, approximately ten o'clock. Then the process is reversed, groups *A* and *B* going to the academic rooms and groups *C* and *D* to the activity room. The afternoon procedure is similar to that of the morning. Perhaps the following diagram will make the situation clearer:

Academic Room	Activity Room	Academic Room
Group C	Groups A and B	Group D
Group A	Groups C and D	Group B
Reading Writing Arithmetic Spelling	Nature study Hygiene Art and construction Music	Reading Writing Arithmetic Spelling

The subjects, reading, writing, arithmetic and spelling, are taught in the academic rooms, while nature study, hygiene, art and construction, and music are taught in the activity room. Besides this the pupils go to the gymnasium two thirty-minute periods each week and to the library one thirty-minute period each week.

The school organized under the traditional plan is the William Ford; the school organized under the traditional plus remedial is called the Alfred Woodworth; the Fred E. Maples School is constructed so that the activity or unit plan is advisable.

For this study the first and second grades of each of the previously named schools were observed. The subjects studied were the "fundamental" subjects of reading, arithmetic, spelling, and writing.

The factors which were as nearly constant as possible were: time allotment for subjects, textbooks and supplementary material, length of school day, course of study, and outlines.

TABLE I

1B-GATES READING, TYPE 1, FORM 1 (WORD RECOGNITION)

Letter Rating	Maples (Activity)					Wm. Ford (Traditional)					Woodworth (Traditional plus Remedial)				
	Name	Age	Sept. Score	Jan. Score	Diff.	Name	Age	Sept. Score	Jan. Score	Diff.	Name	Age	Sept. Score	Jan. Score	Diff.
A	S.C.	6–0	2	17							D.A.	5–8	3	7	+ 4
B	J.C.	6–3	0	15	+15	M.H.	6–3	1	6	+ 5	M.A.	6–0	3	14	+11
	C.M.	6–5	0	5	+ 5	A.B.	6–0	2	6	+ 4					+15
	J.L.	7–0	3	10	+ 7	J.M.	6–11	3	10	+ 7					
					+27					+16					
C+	R.C.	6–2	3	6	+ 3	R.V.	6–0	2	4	+ 2	A.A.	5–9	3	8	+ 5
	S.G.	6–0	3	4	+ 1	G.G.	5–11	2	0	− 2	F.K.	6–1	3	8	+13
	M.L.	5–11	0	16	+16	G.C.	6–0	0	11	+11	M.K.	6–2	0	16	+16
	R.C.	6–0	5	10	+ 5	H.D.	5–11	2	14	+12	O.D.	6–4	4	9	+ 5
	G.M.	6–6	0	7	+ 7	K.B.	6–6	2	5	+33	M.V.	6–5	1	8	+ 7
	M.M.	6–0	4	4	0	R.V.	6–0	1	8	+ 7	S.B.	6–0	0	16	+16
	L.M.	6–3	0	10	+10	B.Y.	6–3	1	12	+11	M.P.	6–6	1	10	+ 9
	N.S.	5–11	0	9	+ 9	B.H.	5–11	1	5	− 4	B.B.	5–10	2	12	+10
					51					48					81
C	A.T.	6–0	5	12	+ 7	C.S.	6–0	3	5	+ 2	R.F.	6–0	5	4	+ 1
	M.B.	6–2	3	4	+ 1	M.D.	6–2	2	6	+ 4	R.B.	6–1	2	11	+ 9
	V.M.	6–3	4	16	+12	J.D.	6–3	1	2	+ 1	E.S.	6–3	2	11	+ 9
	B.N.	6–8	0	16	+16	J.P.	6–4	2	8	+ 6	H.K.	6–6	0	14	+14
	E.L.	5–5	7	7	0	H.J.	5–8	6	0	− 6	M.H.	5–7	0	6	+ 6
					36					7					39
C−	V.W.	6–4	0	4	+ 4	T.M.	6–5	1	2	+ 1	F.B.	6–4	0	22	+22
	L.D.	6–0	0	10	+10	M.P.	5–10	1	5	+ 4	A.G.	6–0	3	7	+ 4
	C.H.	6–1	0	13	+13						J.B.	6–1	2	14	+12
	A.K.	6–2	4	6	+ 2	W.F.	6–8	4	6	+ 2	N.G.	6–3	0	6	+ 6
	M.R.	6–2	3	12	+ 9	V.B.	6–6	3	5	+ 2	H.G.	6–3	0	7	+ 7
	J.R.	7–0	3	10	+ 7	A.W.	7–4	1	7	+ 6	V.R.	6–4	1	9	+ 8
					45					15					59
D	B.F.	6–2	3	10	+ 7	A.P.	6–0	3	6	+ 3	E.G.	6–2	3	11	+ 8
	E.S.	6–3	5	5	0	H.S.	6–0	5	2	− 3	B.Z.	6–2	0	1	+ 1
	R.F.	6–5	1	15	+14	I.B.	6–9	0	17	+17	E.K.	6–5	0	10	+10
					21					17					19
E	A.A.	6–3	3	4	+ 1	M.J.	6–4	1	3	+ 2	B.B.	6–2	0	7	+ 7

The factors which were variable were: size of classes, arrangements of classes during the day, teaching methods, the teacher herself, and special classes.

The Detroit Intelligence Test was given to every pupil in these grades and a letter rating was assigned according to the results obtained. These ratings were *A*, *B*, *C*+, *C*, *C*−, *D*, and *E*. I.Q.'s were not obtained because the author of the test does not believe the test to be specific enough; he feels that a letter rating is a much fairer mark for the child.

The following achievement tests were given in September and January (another form, of course).

Grade 1B—Gates Reading Test, Type I, Word Recognition
Grade 1A—Gates Reading Test, Type I, Word Recognition
Type II, Word Phrase and Sentence Reading
Type III, Reading of Paragraphs of Directions
Grade 2B—Reading—same as 1A
Arithmetic-Compass Survey Test, Elementary Examination
Spelling, Iowa Scale
Writing, Ayres Scale
Grade 2A—The same type as 2B

These tests were given and scored by the home-room teacher in each case, since they were a part of the regular testing program. The teachers were not informed that a study of effectiveness of method was being undertaken.

Two ways of comparison of scores have been undertaken in reading and arithmetic, but only one way in writing and spelling.

First method: A simple mean of the raw scores was computed, no reference being made to age or intelligence, and a comparison was made by finding the difference of the means between the September and January scores.

Second method: A three-way pairing of pupils was undertaken, intelligence, age, and initial scores being considered. A child of specified age, intelligence, and initial score was matched with a child of the same classification from each of the other two schools. This is strictly an industrial community with an ordinarily high mobility of population, but this year, due to the industrial depression, this mobility was even greater than ever before. I can safely say that twenty per cent of the children who took the first test had moved before the second test was given. This does not mean that our enrollment decreased by twenty per cent; other children had taken their places. So, pairings were rather difficult to make because of this great mobility. Many children could not be paired, there being no one to compare them with.

No attempt has been made to measure or compare results in the other subjects—nature study, hygiene, music, art and construction.

Table I is a sample of the way the pairings were made for each form of each test for grades one and two. It will be seen that age, intelligence rating, and initial score of a child in the Maples School were very carefully paired with those of similar children in the Ford and Woodworth Schools. The differences between the September and January scores were noted and the mean difference was taken and used as a comparison of the results in each case.

In the rather comprehensive and complicated Table II will be found tabulated all the data required and arranged in order to help solve or give an answer to our problem. The column leader—a—indicates the number of pupils per teacher; that is, every teacher with whom the children come in contact was figured in the total, such as home-room teachers, art, music, gymnasium, etc.

Glancing at Grade 1B, we see that the Woodworth and Maples Schools have a very similar difference in means of raw

TABLE II

DIFFERENCES BETWEEN MEANS OF SEPTEMBER AND JANUARY SCORES

Grade		Maples (Activity)				Ford (Traditional)				Woodworth (Traditional plus Remedial)			
		a	Sept.	Jan.	Diff.	a	Sept.	Jan.	Diff.	a	Sept.	Jan.	Diff.
1B	1	37.6	2	9	7	35.5	2	7	5	34.1	1.5	9	7.5
	2				6.3				4.1				9.8
1A	1	21.4	6	17	11	22.5	7.5	15.5	8	33	7	16	9
Type 1	2				11				7				3
" 2	1		2.5	11.5	9		4.5	11	6.5		5	10.5	5.5
	2				11.5				5.3				11.3
" 3	1		3	12.5	9.5		4.5	10	5.5		4.5	11	6.5
	2				10.8				6.3				6
2B	1	33.1	17	26	9	27	20	31	11	34.9	19	31.5	12.5
Type 1	2				8.54				5.5				11.6
" 2	1		10	19.5	9.5		13	23	10		13.5	24	10.5
	2				9.6				20				14.2
" 3	1		29	15	6		12	17.5	5.5		14	19.5	5.5
	2				5				5				4.5
2A	1	21	26	32	6	30	27	40	13	30	28	36.5	8.5
Type 1	2				8				12.6				7.6
" 2	1		17	24.5	7.5		18.5	27	8.5		22	27.5	5.5
	2				7				8.5				6
" 3	1		16	18	2		16	20	4		19	21.5	2.5
	2				7.5				5.3				2.5
2B	1		5	14	9		8	14	6		8	14	6
Arith.	2				8.5				15.2				11.7
2A	1		20	26	6		14	39	25		20	35	15
Arith.	2				7.5				15				13
2B Sp.			8.4	36.7	28.3		16.5	50.5	34		18	51.3	33.3
2A Sp.			40	61.5	21.5		45.7	71.5	25.8		48.8	66.2	17.4
2B	R		2	2			2	2			2	2	
Pen.	Q		2	2.5			2	2.4			2	2	
2A	R		2	2			2	2			2.4	2.2	
Pen.	Q		2.1	3.3			2.1	3.5			2.0	3.8	

1 = Means of raw score
2 = Means of matched score
a = Number of pupils per teacher

scores, with Ford School only two points different. Means of the pairing tend to show that the Woodworth School made the greatest gain, nearly doubling that of the Ford (traditional). We do not feel justified in drawing too fine a conclusion here because the statistical difference is slight, but the figures tend to show that in the 1B Grade the traditional plus remedial plan and the unit plan show more improvement than does the traditional. As the 1B was only given the one form of this test the evidence is not great enough to reorganize a school because of what it brings to light.

Now let us look at the 1A Grade. This grade had the three types of the Gates Test and consequently there are three sets of tables. As you will notice by following the figures, the Maples School (unit plan) shows the greatest gain, with Woodworth close behind and Ford again third. Is the evidence sufficient to warrant our concluding that the unit plan is more successful than the other types, as far as the 1A grade is concerned?

2B reading seems to be rather constant as the three types of tests indicate that the growth in each of the schools is about the same. There is not much variation in the arithmetic as shown by the Compass tests and very little variation in spelling and handwriting.

The Ford School (traditional) shows the best gains in all types of 2A reading, with the other two schools varying in their positions according to the form of the test. Again in arithmetic we find the Ford School making the most gain, with Woodworth second and Maples last. Ford School still shows the greatest gain in spelling, but in penmanship the schools show an equal gain.

In the beginning we started to attempt to find out something about the organization of schools and which organization proved the most effective as far as the first and second grades are concerned. We are now faced with a dilemma. None of the organizations is outstandingly strong in each grade but, on the contrary, each grade is different.

The results tend to show that in the first grade the unit or activity plans seems superior. Is this true because the activity plan brings about a slower transition of kindergarten activities to first grade activities? The break is not so abrupt.

In the 2B grade the Woodworth School seemed to be the better. Does this show that the traditional plus remedial plan is the best plan of organization for 2B?

The traditional type, as shown by the Ford School, is superior in the 2A grade. Does this mean that the home-room teacher plan is the best for all 2A grades?

I am inclined to believe that, after all, it is not the type or kind of organization that counts, but that any of the three organizations will produce results if managed by that person who is the secret of all good schools—the good teacher.

In conclusion, I am inclined to believe that the activity plan in the first grade seems to lessen the break between kindergarten and first grade. I am also led to believe that the activity as we are using it in the Maples School needs a slight modification or revision in order to obtain better results. But we did not start out to provide cures or relief measures; we were only attempting to find out which plan produced the best results as far as tests would tell us. Perhaps if we had studied the other subjects our story would have a different meaning, but that is another chapter.

PREPARATION OF A TEACHERS' HANDBOOK

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The present concept of a teachers' handbook is that of a description of procedures which are adaptations to individual school needs. As the handbook is usually written for elementary schools, the content deals largely with administrative practices in which teachers and administrative officers are attempting to reduce and simplify routine. The type and content of the practices described depend to a large extent upon the size of the school. Lists of descriptions of practices and procedures which appear in representative handbooks have been described by Hubbard[1] and others.[2] The lists of possible articles range from verbatim statements of rules and regulations of the board of education and the superintendent, through suggested methods of teaching, to interpretations of school policy.

Use by Teachers. Handbooks are of invaluable aid to teachers new to a school. As they are generally constructed, they are designed to fit the needs of the teacher who has been in a school for a number of years as well as those of the new teacher. The primary purpose of the handbook is to put directions explaining the procedures of the school into consolidated written form so that they are available to all teachers for reference in connection with questions that constantly arise. There is no need to memorize the directions. For example, when a teacher desires to find where certain sets of books are located in the school and how she may secure them for temporary use, she turns to the index and looks under "Books." The article, "Books," depending upon the type and organization of the handbook, will anticipate all questions which may arise in connection with the use, care, distribution, and inventory of books in the particular school. The teacher refers to some articles frequently; to others that describe procedures for which there is only occasional demand, she refers only when she desires an answer to a particular question.

Use of the handbook saves time for the teachers, just as it does for the principal and others. It tends to eliminate controversies over accepted procedures that must be conducted in standardized manner. Reference to suggested methods often helps the teacher not only to save time, but also to improve procedure. The handbook is an assistance to the teacher in so far as she uses it as a guide to the conduct of the many school activities in which she must participate.

METHODS OF DEVELOPMENT

Product of the Principal. Frequently, the principal puts into writing all of the

[1] Hubbard, Frank W., "Obtaining Time for Supervision Through the Handbook." *Elementary School Journal*, June, 1929, p. 748.

[2] Enfield, O. D., "Maintaining Communications Within the Building." *Ninth Yearbook*, Department of Elementary School Principals, National Education Association, 1930, pp. 339-342.

Flowers, Ida V., "Time Economies in the Principal's Duties." *Ninth Yearbook*, Department of Elementary School Principals, National Education Association, 1930, pp. 213-216.

Gibbard, Minnie A., "Handbook for Elementary Teachers." *Educational Method*, XI, No. 6 (March, 1932), pp. 359-364.

routine directions needed by the teachers, organizes and consolidates them, and presents them to the teachers in duplicated form. Where the handbook is the product of the principal, it is inclined to consist largely of his accumulated experience dictated by the problems that need frequent administrative direction. Such a handbook contains articles that are descriptions of the problems of administrative importance largely from the point of view of the principal. There is a disadvantage in this method in that some problems which confront the teachers most frequently will not be included.

Delegation to Staff Member. In some schools the handbook is prepared and written by either an assistant or a teacher delegated by the principal. Even though the staff member to whom the preparation has been delegated may consult with the teachers or principal, there still remains the likelihood that the product will represent largely the ideas and efforts of one individual. There is the added disadvantage in this plan of production that the handbook will not be acceptable either to the group of teachers or to the principal, in spite of the understanding of the problems and ability of the person who prepared it. The responsibility for the preparation of a set of instructions which are to serve as a guide for the conduct of the school is rather great to assign to one member of the staff.

Formation by Teacher Group. Another method sometimes used in preparing the handbook is to appoint a group of teachers to collect and write the articles. In this plan, either one member of the group may write all articles, with the advice of the rest of the group, or each member of the group may write a given section. It is the assumption in this plan that the activity has been given to the group of teachers in its entirety and that the principal does not participate. The finished product is presented to the teachers and the principal. The difficulty encountered in such a method is that many necessary administrative instructions may be neglected, and teacher or pupil activities overemphasized.

Representative Committee Activity. The most efficacious plan to follow in the preparation of the handbook seems to be through bringing together a group that represents the various elements of the school. The committee will include at least four or five teachers and the principal. Some schools have included one or two children of outstanding ability. Other schools have asked and secured the advice and assistance of one or two parents in the committee that has prepared the handbook. When the completed handbook is the result of coöperative activity of a number of people who bring their different points of view to bear upon the procedures that are described, it is likely that the form and content will be far more usable than might result under any other plan of preparation. Interpretations are based upon the experiences of all who are concerned. Familiarity with the content and described practices is predetermined.

COLLECTION OF MATERIAL

Determination of Content. The development of an effective handbook which will not require immediate revision of an elaborate nature takes considerable time. It is desirable that all directions or instructions relating to the conduct of school activities during the course of the year be retained in written form. These notes will then provide a nucleus for the organization of the handbook. To be placed in permanent form, notes that have been written hurriedly must be refined and adapted to specific needs.

Established routine of the school usually forms the larger part of the content. But to refine previous directions for the conduct

of established routines demands careful consideration, actual trial, and revision. For example, the school may have followed a definite routine for the conduct of fire drills, but to place instructions for fire drills in a form suitable for the handbook will require brevity, accuracy, and careful explanation. The representative committee will consider previous instructions given for fire drills, change the procedure on the basis of its deliberations, hold a fire drill according to the new plans, then refine the written directions for the handbook.

The determination of practices to be included depends upon the needs of the school. Many articles will be local adaptations of practices followed generally throughout most schools in the city. Adjustments of generally required procedures may not vary in results achieved, but the descriptions may be determined upon the basis of the combined judgment of those who form the committee.

Classification of Content. Probably before articles are actually written it is wise to determine the list of those which are to be included. When this list is ready, from the standpoint of logical organization, it will facilitate both writing and use of the handbook if subjects of somewhat similar nature are grouped under large topic divisions. All articles that relate to keeping necessary forms and records may be grouped in one part of the handbook under the heading, "Forms and Records." Articles that deal with the conduct of the school may be grouped under a heading, such as, "Administrative Procedures." Similarly, all other subjects may be grouped for more effective use. In this way each article will conform more closely to the major subject of which it is a part.

SELECTION OF FORM

Available Facilities. The manner in which the handbook is produced in duplicated form depends somewhat upon the equipment and sources of material at the command of the school. Most teachers' handbooks are in mimeographed form. If no duplicating machine is owned by the school, it is frequently possible to provide the materials and have the work done either by a neighboring school or by a commercial firm at small cost. Some handbooks are printed, but while this is preferable when ease of reading is considered, it adds greatly to the cost and tends to delay necessary revisions.

Desirable Features. If the handbook is mimeographed, the paper must be of the best grade obtainable, as it will assure a better print and will wear longer under constant use. The size should be 8½″ by 11″, since use of the longer paper would make the handbook difficult to handle.

Pages should be fastened together in semi-permanent form. A heavy cover should be selected, since the length of life of the handbook will thereby be considerably extended. Various grades of heavy, flexible, loose-leaf folders are available for this purpose. The color of the folder should be dark to prevent the appearance of soiling.

Consecutive numbering of the pages is a necessity. In addition to page numbers, it will be desirable to number each article in the major grouping of subjects consecutively. For quick reference to subjects, it is also desirable to number the subject groupings so that it is possible to refer directly to articles, *i.e.*, Part II, Article 9, page 11.

Both a table of contents and an index should appear in the handbook. The table of contents on the front page gives the name of each article under its group heading in order of appearance. The index, at the end of the booklet, gives page and article numbers of subjects arranged in alphabetical order.

Probably all of the writing of descriptions which are placed in the handbook should be done by one member of the committee. This insures uniformity of style. The person to do the writing should be the member who is best able to present lucid instructions with the greatest brevity and directness. That person should be familiar with the style of other handbooks. If complete descriptions of procedures are given, it will help to summarize or outline the longer ones by the use of single words or short phrases. Effective use of the handbook will depend to a large extent upon the length and clearness of the descriptions of various practices.

PROVISION FOR FUTURE CHANGES

Need for Revision. Even though the first draft of a teachers' handbook in any school may be an excellent example of its kind, there will be need for revising parts of it before it is placed in use. This condition cannot be avoided as long as there is continual change and improvement in methods used in the school. Articles should seldom extend from one page to the next, *i.e.*, every article should begin and end on the same page. Some pages may contain several short articles. Then, when the description given for a certain procedure needs revision, it is necessary to rewrite only the one page. The loose-leaf binding suggested above permits easy replacement of pages. When supplemental directions must be included, they may be placed on another sheet and inserted immediately following the original article.

Study of Effectiveness. The teachers and principal who have prepared the handbook should outline and conduct a study of the use and effectiveness of the handbook with a view to improving it through revision. While most of the study will of necessity consist of personal opinions, some phases of it may be of an objective nature. For example, a survey may be conducted of the number of interruptions to the classroom during the school day; the number of questions asked in the office by teachers may be compared with the number asked before the teachers' handbook was placed in use; the number and frequency of oral or written bulletins issued to teachers may serve as an indication of the handbook's value; and the amount of time given by teachers or principal to administrative activities will tend to show whether or not the handbook is effective. In addition to these parts of the study, expressions of opinions should be asked from all teachers and their suggestions solicited for revision. All of the data accumulated by the study may well be tabulated and conclusions drawn to serve as a basis for changes to be made in the future.

SUMMARY OF PREPARATION

A review of the salient features discussed in this plan for preparing a teachers' handbook indicates the following steps to be considered in their logical order:

1. Develop as administrative device to reduce routine
2. Use by teachers as a reference guide
3. Prepare by a representative committee
4. Select content on basis of individual school needs
5. Careful organization of content required
6. Present material in mimeographed form
7. Present clear, concise directions and suggestions
8. Provide for revision of articles as need demands
9. Appraise the effectiveness of the handbook

The organization and administration of the elementary school, to present the best possible conditions for child growth, demand that routine be simplified. A teachers' handbook to which careful consideration of detail and content is given will facilitate the whole instructional program.

CAUSES OF FAILURE AND SUCCESS IN SCHOOL — II

JOSEPH MILLER

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The present research is a sequel to a previous study.[1] The group of children studied in both instances consisted of 1,021 children who were considered dull by the teachers and 337 children who were considered bright. In the preceding study we considered mainly the personal qualities of children which are likely to be at the root of success or failure in school. Language factors, reading, conduct, attendance, grades repeated, physical defects, and personal appearance were studied. During the past school year we have tried to correlate success and failure in school with various factors in the child's environment, such as recreational possibilities, the type of discipline used, religion, education of parents, the number of children in the family, etc.

The information was received through home visits and interviews of the visiting teachers. The following data were secured:

	Bright	*Dull*
1. *Religion*		
Catholic	53%	62%
Protestant	32%	36%
Jewish	15%	2%
2. *Occupation of the father*		
Professional	12%	....
Engineer	14%	....
Tradesman	20%	18%
Salesman	29%	14%
Laborer	25%	50%
Unemployed		18%
3. *Place of birth of the parents*		
Father born in the United States	63%	48%
Foreign born	37%	52%
Mother born in the United States	71%	38%
Foreign born	29%	62%
4. *Education of the parents*		
Father: None		35%
Few grades	5%	23%
Grade school	26%	26%
Junior high school	29%	12%
High school	30%	4%
College, law school, medical school, etc.	10%	....
Mother: None		30%
Few grades	9%	14%
Grade school	17%	21%
Junior high school	24%	23%
High school	40%	12%
Normal school, school for nurses, etc.	10%	....
5. *Number of children in the family*		
1	8%	....
2	25%	13%
3	24%	27%
4	25%	5%
5	9%	14%
6-9	9%	29%
10-12		12%
6. *Language spoken at home*		
English	68%	33%
English and foreign	23%	35%
Foreign	9%	32%

[1] "Causes of Failure and Success in School." *Educational Method*, March, 1931. This research also was conducted by the staff of the Guidance Department of Wilkes-Barre city schools.

	Bright	*Dull*
7. *General appearance of the home*		
Well kept and clean	85%	48%
Not well kept	15%	52%
8. *Neighborhood*		
Good	58%	33%
Fair	32%	36%
Poor	10%	31%
9. *Family situation*		
Father or mother dead, stepfather or stepmother	3%	29%
10. *Financial help given by various social agencies*	28%	89%

In the case of bright children, the families were helped chiefly by the visiting nurses' association and hospitals, whereas the families of the dull were helped by various charitable organizations; 10% were aided by as many as 5 and 8% by 7 organizations. These data were secured from the social service exchange.

11. *Type of punishment* (given in order of frequency of use)

Bright	*Dull*
Scolded	Whipped
Deprived of pleasure	Scolded
Slapped	Never punished
Put to bed	Slapped
Sent upstairs	Talked to
Talked to	Deprived of pleasure
	Sent upstairs
	Put to bed

12. *Some personal impressions of the interviewer about the family and its reactions toward the child*

Bright	*Dull*
Interested in children	Interested but does not know what is the matter
Good home environment	Is willing to do anything
Very systematic	Apparently the child is misused and neglected
Give rewards	Mother poor manager
Keep their children very strictly	Interested but does not know how to control the child
No preferences among children by parents	Mother not disturbed—"everything will be all right"
Very intelligent in conversation	Unconcerned
	Admit that they have spoiled the child
	Admit that the child is quite dependent
	Parents appear intoxicated
	Mother is very nervous, cries all the time
	Have tendency to complain
	Father inclined to blame mother and vice versa

Many parents of the failing children were very interested in their children but felt helpless and could not explain why their children were failing.

13. *Disposition of the child* (as given by the parents)

Bright	*Dull*
Good	Good
Quiet	Easy-going
Well-behaved	Quiet
Sensitive	Pleasant
Affectionate	Well-behaved
	Stubborn
	Disobedient
	Nervous
	Very active
	Sometimes mischievous
	Cries easily
	Too mild
	Lazy
	Spoiled
	Usually has his own way

In some of the factors investigated no great difference was found between the bright and dull children.

14. Approximately the same percentage of *normal and instrumental* births was reported in

both groups. On the other hand, there was a marked difference in

15. *the age of teething, walking, and especially talking.* Many of dull group were reported "slow" in these respects.
16. *The number of hours of sleep* were equal in both groups.
17. The same holds true of *appetite,* which seems to be as often poor among "bright" as among "dull" children.
18. *Children's diseases,* as well as pneumonia and serious accidents, were reported in both groups with equal frequency. Mental reactions to illnesses of that sort vary, of course. Some children are made more dependent and spoiled as a result of ill health, others are driven from vigorous physical activities to study because of a delicate constitution.
19. The variety of *social recreational activities* was divided about equally in the two groups. Some of the bright children played alone, some with others. Dull children have had friends in the neighborhood, others preferred to play alone. Playing school is a greater favorite with the bright children than with the dull ones. The bright child usually wants to act as the teacher.

    Planned adult-supervised recreation is prevalent among the bright children. The bright children visit the movies oftener with parental consent than the dull children. About fifty per cent of the bright children visit the movies once a week. On the other hand, fifty per cent of the dull children never go to the movies, at least to their parents' knowledge. In some cases the parents claimed to lack funds for movie admission and reported that their children never went to the movies, whereas the children themselves talked freely of movie attendance.

CONCLUSIONS

Some cases of failure in school are due to physical causes, such as premature birth, physical weakness, or glandular disturbances. The majority of failures, however, seem to be due, according to our research, to language factors, to attendance, to personality qualities, and to methods of group instruction.[2]

The following environmental factors seem to be of paramount importance in determining failure and success in school: The education of the parents, the language spoken at home, the number of children in the family and the financial security of the parents. In cases where a favorable combination of these factors is lacking, the child is doomed to failure in school.

[2] "Causes of Failure and Success in School," *Educational Method,* March, 1931.

THE CLEARING HOUSE

DID THE PUPILS FAIL?

In the January issue of this journal appeared an article entitled, "Why Pupils Fail," by Charles C. Guilford.

The data for Mr. Guilford's study were obtained from one hundred and sixty senior high school students who "were asked to write on slips of paper, not bearing their names, the reasons for their failures on the last report card received and, in cases where the highest mark was not received, to tell why the mark was not higher."

The reasons given make interesting reading, and probably it was the author's purpose to let the students talk and the readers draw their own conclusions, since the only conclusion drawn was "that only a few pupils didn't know why their marks were not better is rather complimentary to teaching, and in spite of the charges made by the pupils against their teachers,[1] proves the teachers must have been rather fair in their dealings with the pupils."

It is not the intention of the writer to criticize Mr. Guilford, but the implications of the article are so far-reaching and fundamental that they should not go unchallenged, especially since the study was published in one of the leading educational periodicals having to do with efficient teaching and learning.

It is the purpose of this paper to call attention to several implied or stated conclusions in the article which are by no means proved with the data given and which, if accepted, would lead to serious results wherever applied.

In the first place, the title of the article, "Why Pupils Fail," is misleading. The assumption seems to have been that the students know why they fail, and therefore, whatever reasons given by them are valid. This assumption, of course, must in the very nature of the psychological, biological, and sociological factors involved in efficient teaching and learning, and about which high school students are practically wholly ignorant, be false. To cite only a few of the cases given, quoting the students' own words:

I'm too lazy; I just study hard enough to get by.

I didn't pay enough attention to teacher's explanation.

I didn't take my book home.

I wasn't interested.

I don't like biology.

I just glanced over my history and thought I knew it, but I didn't.

I don't understand it.

I am not a bright pupil.

I couldn't remember it after I studied it.

I am just a little too dumb.

I studied, but it just didn't sink in.

Teacher doesn't understand me.

My teacher doesn't like me.

I failed because I did not have my home work done five times.

I didn't study for the kind of test the teacher gave.

Tests were too difficult for anyone in the room.

I can't remember those awful names.

Didn't recite enough.

Don't like to recite in class.

Am called on when I don't know anything.

I talk too much.

I am too playful in English.

Each statement cited cannot be referred to separately and critically analyzed. Two

[1] See pages 220-221 of the article.

or three pertinent questions may, however, indicate the fundamental fallacies in the assumptions of the paper. Why didn't these students study, do their home work, participate in class? Why weren't they interested? Why didn't they understand, etc.? Have the pupils failed or have the teachers failed? The real reasons for these pupil failures obviously are neither given nor understood by the pupils. The data given are fundamental and, when analyzed, point to the conclusion that the teachers have failed and not the senior high school students. One wonders how much longer school administrators and teachers are going to attempt to justify their failures with the ignorance of the pupils. Is balancing the budget with the ignorance of the children any less pernicious and criminal?

The conclusion of the author, "that only a few pupils didn't know why their marks were not better is rather complimentary to teaching, and in spite of the charges made by the pupils against their teachers, proves the teachers must have been rather fair in their dealings with the pupils," cannot, therefore, be valid. The pupils do not know the real causes for their failures. As a matter of fact, the data given by the students point unmistakably to the conclusion that the teachers have failed and not the pupils.

GROVER C. HOOKER,
Stanford University.

HEALTH THOUGHTS

"Health Thoughts Learned from Brownie and Tiny," says the dignified chart in a second grade room. What are these thoughts? Who are Brownie and Tiny? Surely they must be two precocious children in the room—we'll ask the teacher. Imagine our surprise and delight to find that Brownie and Tiny are none other than two little Duroc-Jersey pigs.

The motive in bringing the pigs to school was to stimulate an interest in health, as the room had many underweight children, and the teacher sought this method of interesting the pupils in proper food.

After a lively vote, the children christened the pets Brownie and Tiny. These pigs were sisters and were pedigreed, yet they were anemic. Tiny, as her name indicates, was in a very emaciated condition. She was fed on skimmed milk, yet did not gain. Brownie, who was slightly more rotund than her sister, was put on a diet of whole milk and oatmeal for two weeks. She gained nine pounds. At the end of this time, the children could see such an appreciable gain in Brownie that they were most interested in Tiny's welfare. After discussion as to the proper food for gaining weight (we wished to add something to Tiny's diet to help Tiny "get on her feet" quickly), a committee was named to visit the McCoy hygienist. She advised cod liver oil. This pleased the children because many of them had taken cod liver oil. Tiny gained three pounds in a week.

Observations noted: (1) Up to this time Brownie had a finer skin and a prettier color; (2) Brownie had more pep.

The pigs spent all day in their commodious cage in the school yard, basking in their improvised solarium. The children learned that: (1) sun makes for growth; (2) sun kills germs (the trough was washed after each feeding).

Punctuality and regularity of eating causes growth. No eating between meals for these babies. They were always hungry at mealtime, and appreciated their food.

In the library books and supplementary readers it was very easy to find "pig" stories or stories of milk. The kind farmer who brought the pigs to school brought some country butter and "cottage cheese." These two products caused much interest and so a real motive was found in reading their health stories.

Every pupil was a participant in this health activity. Good citizenship and scholarship were prerequisites in serving on any of the sundry committees. There was a committee to scrub the trough and to prepare a clean bed; a committee to choose good citizens and one to prepare the food.

Could two little carrot-colored porkers be of educational value?

In number work, these second grade children learned to measure. They will never forget that two cups make a pint. They had to measure boards for Tiny's and Brownie's house. How could they find out how much their pork friends weighed? By learning how to weigh. Tiny and Brownie were modern babies. They had to be fed on a schedule, so it was necessary to tell time. Milk had to be bought, so the price of milk and size of bottle gave further number knowledge.

Could these children be so cognizant of health values without wanting to know how to spell *milk, clean, live, water,* et cetera?

Many original stories added to the pleasure of their language period, and many original verses were created.

The children spent several interesting art periods in "free life" lessons. Perchance the modeling of Tiny and Brownie in clay by an embryo artist will cause the pendulum of creative work to swing forward to the realization of a sculptor's dream. Who knows but that the health lessons inculcated in this activity will bring forth another Pasteur, or that the remedial qualities of cod liver oil will save many of these children from malnutrition, or that an emaciated city soul may be turned loose into Nature's own playground —the farm—and that a great agriculturist or poet will be born?

As in any social situation, the greatest asset of Brownie's and Tiny's visit came from the amalgamating of citizenship with life. Courtesies, such as keeping one's place, taking turns, unselfishness were instilled in the children. They saw what good they could do in this world—that proper care and kindness bring reward both on the physical side and, unknowingly to them, on the spiritual side, as in the words of seven-year-old Louis Black, one of the pupils in the class,

"Little Piggies, are you here
To share your life, and bring us cheer?"

VESTA FARMER,
McCoy School,
Kansas City, Mo.

THE PLAY MY SCHOOL HAD

One day I asked the pupils of my fifth and sixth grade English sections how they would like to write a play as part of their regular work in English. Of course, every one of the pupils in the four sections expressed eagerness—anything, it seemed, to get away from routine work! When I made the suggestion, I had in mind only the dramatization of some simple story, without costumes or audience, in the privacy of the classroom.

Of a number of stories suggested, "The Twelve Months," a fairy story, received a majority of votes. As you may remember, the story deals with a cruel stepmother, a wicked daughter, and a good little stepdaughter. The latter is frequently sent into the woods on absurd errands, such as gathering strawberries or violets in the wintertime. On each occasion she meets the Twelve Months at their council fire, and receives aid from one of them. The end of the story finds the evil relatives perished in the forest and the good child made happy.

The children began by tearing the story to pieces in class. They discovered for themselves that the scenes, representing the

various episodes of the tale, would be short and insipid without some invention on their part. This obstacle they overcame by introducing a fairy godmother to act as a connecting link between the scenes; to provide illuminating conversation not in the story; and to guide the heroine to a happy climax.

After the general plan of the play had been thoroughly discussed in class, the actual writing began—a scene at a time. When completed, it comprised three acts of three scenes each. Each scene in the play represented the most adaptable of 160 papers submitted. It was my custom to select a number of the best from each set of scenes and then let the children choose the winner.

As the writing of the play went on, the children became more and more interested. First, they wanted paper costumes; then they wanted to invite parents; then, more children wanted to take part in the dramatization. I arranged satisfactorily for all three wishes.

All the pretty girls in my sections I massed into a fairy chorus. Members of this group were to give dances between acts and to perform as a whole in the final scene at a party given the heroine by the Months.

Bits of "temperament" had to be overcome with the star players. For instance, the girls who best took the parts of stepmother and daughter refused to be lost in the forest, and insisted on coming back and dancing with the fairies in the "big scene." The plot was finally stretched so that the fairy godmother could find the erring relatives and reform them.

My theatrical organization formed itself as it went along. There were committees for costumes, scenic effects, invitations, ushering, and the check-room. All rehearsing was done after school hours. To keep my players in line, I appointed one or more substitute players for each part. Any child missing two rehearsals was automatically dropped. By the day of the play, many of the paper costumes which I had sanctioned had given way to more substantial materials with tinsel effects.

The drama was presented in the classroom before an appreciative audience of parents, school officials, and social workers. The children were encouraged to repeat the performance publicly in a large local auditorium.

The business end was handled entirely by the children, as was the purely theatrical phase. A small admission fee was charged and more than 1000 tickets were disposed of through this juvenile organization. The net proceeds were given to the Junior Red Cross.

My organization at its height looked rather formidable, I believe, to some of the teachers, but it was really not so. It simply formed itself as it went along. I did very little of the actual work. Even in the mass dances in which about fifty children took part, I trained only a few apt boys and girls and these in turn taught the rest.

What interested me most was how children considered stupid by some teachers came to the front during the project and showed much real ingenuity. For instance, my stage manager, a little Italian, had been considered both "thick" and useless. Far from being either, his energy and aroused mentality were rather amazing to all acquainted with his record. He easily held his own on the board of committee chairmen who managed the project. All of the board of managers, I might say, were in their places by the law of gravity. When any dispute about position arose, I stepped aside and it then became a case of "the best man wins."

SARA COLEMAN,
Harrisburg, Pa.

EDITORIAL COMMENT AND REPORT

SOCIAL SCIENCE IN THE ELEMENTARY SCHOOL CURRICULUM

A generation ago the courses of study in United States history and geography furnished all that was considered required in this field. With the coming of the "project method" and various attempts to relate the work more and more to the actual life of the child, these subjects as then organized were held unsatisfactory. It was felt that the history work should be organized more around vital present-day problems, and that geography should also be so organized. This brought into focus certain vital industrial, economic, and social problems, and the content of history and geography was utilized to aid in the solution of these problems. This led to the proposal to merge geography, history, and civics into a single subject, to be called "social science," which would deal primarily with vital modern problems. This proposal is in line with the general effort to fit the child more effectively into the life about him. It is very much worthwhile, but is this the best way to realize it?

It seems clear that a knowledge of history is essential to any adequate understanding and appreciation of modern life. The only question which arises is as to whether the history which the elementary pupil should know should be limited to United States history. It would seem that certain aspects of world history are important enough to find a place in this course. Therefore the course in history should apparently be retained, but it should be extended to include important phases of world history.

History and geography cannot be merged into a single subject. History is a humanistic subject like literature; geography is a science. There are interrelations, but history has more in common with literature than with geography. No one has proposed the merger of history and literature.

Geography should be retained for the contribution it makes toward an understanding and appreciation of our world. It is a different contribution from that of history, but equally valuable.

But, as before, we realize that after history and geography have made their contributions, there are still some elements essential to an adequate understanding and appreciation of modern life which have not been touched upon.

It would seem that a child, to be adequately fitted into the life of which he is a part, should not only understand and appreciate the essentials of the history of the world, and of the geography of the world, but also that he have some understanding and appreciation of the great industrial, economic, governmental, and social problems of modern life. He should have an introduction to sociology, economics, politics, and ethics. The subject proposed to cover this field could with propriety be called "social science." Through an interpretation of modern life in these aspects, as well as from the point of view of history and that of geography, it would seem possible to induct the pupil effectively into modern life. History, geography, and social science would each have a vital function in the elementary school curriculum. History and geography would be retained and modified so as to make a more vital contribution, and a new subject, "social science," would be added, in order to accomplish more effectively the purpose of fitting the child for efficient membership in modern society.

F. M. U.

RECORDS

The greatest invention in human history was that of the printing press. Since this invention, the curve of man's progress has turned sharply upward. Previously it was a long, almost horizontal line. The greatest treasures of mankind are stored away in books. The best thoughts, ideals, and aspirations of the race are conserved by means of the printed record.

One reason why educational administration has progressed more rapidly than educational supervision as a science is because educational administrators for many years have kept much more adequate records of their activities than have supervisors. These records were available for study in working out the science of educational administration.

After a principal or other supervisor has served for twenty-five or thirty years in one position and retires, what does his successor ordinarily find in the way of records? There will be attendance and scholarship records, but that is about all. During these years of service, this principal or supervisor has doubtless faced many acute problems in the administration and supervision of the school, or the school system. If, each time a major issue was faced, he had set down a record of the issue, what was done about it, and the results, such a record over a period of twenty-five or thirty years would afford the new principal or supervisor a comprehensive survey of what had happened professionally in the school or the school system during this time. He would thus be enabled more intelligently and more effectively to integrate his own plans into the situation he faced. If we had had such records, from thousands of principals and supervisors in the past, what a contribution we would now have toward the building up of a science of supervision!

If principals or supervisors are called upon to make a quarterly, semi-annual, or annual service report, it would be most appropriate in such a report to set down an account of the major issues faced, and what was done about them. These accumulated reports would, in the course of time, constitute the desired type of record of supervisory services. It is recommended that all principals and supervisors keep such records, whether required or not, not only for the benefit of their successors, but chiefly for their own benefit. By frequent review of this record, nothing will slip out of mind, the gains will be conserved and consolidated as they are made, and decisions will become increasingly more consistent, more intelligent, more effective, and more scientific.

F. M. U.

PERSONNEL FOR CURRICULUM REVISION

Flavius L. David of the Curriculum Laboratory of the School of Education, Western Reserve University, has prepared a comprehensive analysis of the topic, "The Selection and Organization of Personnel for Curriculum Revision." The material was collected by means of a questionnaire addressed to some three hundred school systems, from which forty-one answers were received. The cities varied in population from 5,000 to 1,300,000.

The material is organized under the main heads: practical grounds for revision; production of the revised curriculum; curriculum committees; school officers and their activities; recommendations; and bibliography. An excellent subject index completes the report.

WASHINGTON SCHOOL YEARBOOK

The yearbook for 1931-1932 of the Washington School in Springfield, Massachusetts, of which Miss Sara E. Chase is principal, is devoted to arithmetic. Like the yearbook for 1930-1931, its contents were contributed by the pupils of the

school, the subject matter being taken from their regular school work. All grades, including the kindergarten, are represented. The cover design was made by one sixth grade class and the printing was cared for by another. No doubt this excellent expression of the life of the Washington School will be as welcome and as much sought after as its predecessor, copies of which were ordered from twenty-seven states.

SOME NEW COURSES OF STUDY

The Chicago public schools have recently published course of study bulletins in science and nature study and in composition for the first six grades. These are unique in form inasmuch as loose-leaf folders and marginal index tabs have been used. These devices make the material both easily accessible and readily revisable. In the course in science many units of work are reported. Since this is a field so far but poorly worked, these will be highly suggestive to other school systems. The course in composition carries forward the Chicago policy of printing composition standards selected by teachers and accompanied with comments as to excellence. Both courses were worked out by committees made up of representatives of the supervisory force of the Chicago Normal College and the schools themselves.

From Minneapolis comes a new course in safety and health education, from kindergarten through the sixth grade. Special recognition is given in the preface to the principals and teachers of the Bancroft and Schiller Schools in that city for their contributions to the course. The general editorial work was in the hands of Miss Ermina Tucker, assistant supervisor of physical education, Miss Leone E. Peters, principal of the Field School, and Miss Lillian Jasperson, principal of the Bremer School. The body of the course, following statements of general objectives and grade placement of topics, is made up of large units arranged with a statement of the major objective and four columns devoted to: (1) contributing habits, knowledges, skills, and attitudes; (2) illustrative situations and suggestive activities; (3) references and teaching materials; (4) outcomes. There are also illustrative lessons and an appendix containing material on such topics as the dental program, care of the mouth, nutrition of growing children, health of public school teachers, care of the eyes and ears, and the tired school child. The whole is well designed as a guide to the teacher in the program of health and safety.

WISCONSIN'S PHILOSOPHY OF EDUCATION

The Wisconsin Teachers Association has issued a brochure containing a philosophy of education worked out by the Teacher Training Council of that organization. The Council believes that its statement points the way to new emphases in education. Suggestions from many sources were received and incorporated and general approval by educators in Wisconsin has been secured. The Council requests teachers to report on applications made in their actual classroom work of this philosophy.

The statement is organized under the following heads: Educational Objectives, Democracy, Individual Differences, The Attitude of Inquiry, Controversial Questions, Interests as Educational Objectives, Some Essential Factors of Learning, Self-Direction Necessary in Learning, Growth and "The Child Centered School," Education as Adjustment, The Problem of Drill, Transfer of Training, The School as One Educational Agency Among Many.

The committee in charge is under the chairmanship of O. H. Plenzke, of Madison, and has for secretary B. E. McCormick, also of Madison.

PHILADELPHIA REGIONAL CONFERENCE OF THE PROGRESSIVE EDUCATION ASSOCIATION

An elaborate program of discussion of current issues was carried out in Philadelphia February 3 and 4, by the Progressive Education Association. The general plan of the conference was a statement of issues to be presented by discussion leaders and handled through give and take with the members of an invited panel. There were also set addresses at the evening meetings on "Education for Industrialism," by Ex-Police Commissioner Glassford of the District of Columbia; "America Enters a New Era," by Professor Harold Rugg of Teachers College; "A World of Nations Challenges the Teachers of America," by Stephen Duggan, Director of the Institute for International Education; "The Engineer Looks at America," by Wayne Parrish; and "Education and National Destiny," by Professor George S. Counts of Teachers College.

The topics for group discussion, with the chairmen, were as follows: "To What Extent Are Modern Theories of Education Applicable to All Schools?" H. R. Vanderslice; "Education for Social Responsibility and Civic Participation," Lucy L. W. Wilson; "The Parents' Part in the New School," Karl de Schweinitz; "Preparing Children for a Changing Social Order," Bess B. Lane; "Social Responsibilities of Secondary Education," John A. Lester; "Parent-Teacher Groups Face New Responsibilities," Lois H. Meek; "The Teacher's Responsibility for the Individual Child," Virginia Robinson; "The Place of the Arts in Developing Forms and Values for a New Society," Philip N. Youtz; "Problems of the Rural Teacher in the Changing Community," Allan Hulsizer; "Preparation for Social Planning Through Education," Harold F. Clark.

JUNIOR AUDUBON CLUBS

The National Association of Audubon Societies announces that through the generosity of its friends it is again enabled to furnish colored bird-pictures and leaflets to school teachers and pupils of the United States and Canada. Teachers who are interested in organizing Junior Audubon Clubs in their classes, for the purpose of bird study, may receive the circular of explanation by sending a request for it to the National Association of Audubon Societies, 1775 Broadway, New York City.

PEACE LEAGUE EXHIBIT

The Women's International League for Peace and Freedom has a traveling exhibit of about 200 children's books covering the ages from pre-school through the junior high school. The aim of the exhibit is to present a background of other countries and other people in such a way that the reader will feel that a real experience has been created in his life. The books have been selected primarily because they are books which children will read and enjoy. The information books on the list have been so selected that they will supplement the school work. This exhibit will be loaned for a period of one month for the cost of transportation only. A complete list of the books and any information desired may be obtained by writing to the Pennsylvania Branch of the Women's International League for Peace and Freedom, 1924 Chestnut Street, Philadelphia, Pa.

THE READER'S GUIDE

SUPERVISION AND THE CREATIVE TEACHER

The Department of Supervisors and Directors of Instruction of the National Education Association offers its fifth yearbook[1] as a contribution to the movement for the progressive development of the creative principle in supervision of instruction. If progressive thinkers in education are to be consistent, it is necessary that the concept of learning as creative shall extend to the teacher as well as to the pupil. Otherwise we should have the disturbing paradox of a democracy of learning for pupils directed by a group of teachers working under an authoritarian type of supervision. If learning is to be regarded as creative, then teaching and supervision must be creative also. The yearbook is devoted to the task of showing how the creative principle may operate in supervision of instruction.

The committee in charge of the yearbook, headed by Miss Elma A. Neal and composed of Fred C. Ayer, Philip W. L. Cox, Carleton E. Douglass, Fannie W. Dunn, L. Thomas Hopkins, William J. Klopp, Ima L. Kuykendall and Worcester Warren, has prepared a well-organized and effective report for the most part, consisting of a statement of the problem, principles of supervision for creative teaching, supervisory procedures, case studies, summary and conclusions, and bibliography. The latter is well annotated and constitutes a valuable document for those interested in learning, teaching, and supervising as creative activities. The volume is well printed and edited and attractively bound.

The value of the report hinges upon the validity of the concept of the term creative. Those who do not believe in the psychological definition of creative as set forth in the report will question the possibility of teachers of little or no training and of inferior ability assuming the amount of freedom and the degree of initiative which is advocated in the report. To the progressive thinker, however, the necessity of freedom of choice, of opportunity for originality in expression, and for the progressive development of personality through fruitful experience, guided by sympathetic supervision, will seem to be both logical and conclusive. Education for life in a democracy must be democratic from top to bottom to be consistent.

In its attempt to set up principles for the guidance of those who would engage in creative supervision, the committee has done an important work. The eight principles expounded furnish valuable guide lines for the would-be creative supervisor and enable the supervisor who has been creative in spirit to check his practices against tentative standards. The illustrations of these principles in operation in St. Louis and Hamtramck are illuminating.

Professor Ayer's chapter on supervisory procedures is a concrete and practical discussion of ways and means of putting creative supervision into practice.

In the chapters devoted to case studies, which constitute the body of the report, the reader who thinks concretely will find, perhaps, his greatest stimulation. Here creative supervision is revealed in practice. The case studies are very uneven in quality, however, as might be expected, since

[1] *Supervision and the Creative Teacher.* Fifth Yearbook of the Department of Supervisors and Directors of Instruction, National Education Association. New York: Bureau of Publications, Teachers College, Columbia University, 1932.

they are selected from actual practice and not developed theoretically. It is noticeable that creative supervision seems to be far more common in the elementary school than in the secondary. On the whole, these case studies reveal the fact that experimentation in a new type of supervision is under way and that already definite accomplishments have taken place.

A very effective summarization of the body of the report is made by Miss Neal in the last chapter. The busy reader will find in this chapter a condensed review of the yearbook.

On the whole, the yearbook is a valuable addition to the literature of supervision. It has left the realm of theory and become concrete and practical. Although not all of the interesting case studies reveal the presence of supervision as the stimulating cause of better teaching, there is sufficient evidence to show that, when teachers are made coöperative agents in the improvement of instruction, the results are often most wholesome. Supervisory officers should receive much stimulation for better supervision from this report.

G. A. Yoakam,
University of Pittsburgh.

FOR DEMOCRACY THROUGH DEMOCRACY

Most persons will readily agree that education should make for good citizenship. Few, however, can define with anything approaching precision what they mean by good citizenship. To be loyal and to vote as often as possible sums it up in popular thinking. Professor Coe has done an extraordinary service in putting content into the term and in showing what is and what is not the sort of education we ought to support.[2]

In his view the attitude which the state assumes toward the little citizen is quite as important as his attitude toward the state. In the school the two meet face to face. "In the public school the pupil comes into direct official relations with the state. He hears the state speak through its accredited spokesmen, sees it in action in one of its deliberately organized institutions, experiences from it pressure and attraction, and makes response, then and there, *to the sovereign.*" There is more than this, however. "In the same experience in which the pupil discovers how it feels to be a citizen, he begins to realize how it feels to be a sovereign." Failure to recognize this twofold nature of school life, the writer thinks, largely accounts for our failure in civic education. "We have talked much of duties *to* the state, but we have been silent concerning duties *of* the state." Education should be regarded "as the experience of children and youth in the gradual assumptions of the responsibilities of sovereignty."

Professor Coe is unequivocal in his views of autocracy and dictatorship, concealed or avowed, economical, ecclesiastical, or military. His exposition of the efforts of the army to indoctrinate as many young men as possible with orthodox military ideas of patriotism is one of the best parts of the book. The chapter on character development is also excellent.

He makes no pretense to a comprehensive discussion of the so-called social studies. He would undoubtedly subscribe to the statement that much more than the pursuit of certain studies is involved in a good program of education for political citizenship and that the good life includes far more than activities relating to the general welfare.

The book is the outgrowth of wide reading, long study, rich experience, and mature reflection. No other man in the country could have written it. Coming as it does in the midst of a period of heart-

[2] *Educating for Citizenship.* By George A. Coe. New York: Scribner's, 1932.

searching concerning our institutions, it is most timely. No urging should be necessary to induce thoughtful citizens, both in and out of schools, to read it. They cannot afford to do otherwise.

FIRST FRUITS OF THE COMMISSION ON THE SOCIAL STUDIES

The report of the Commission on the Social Studies, set up by the American Historical Association and subsidized by one of the foundations, is beginning to issue from the press.[3] The two parts at hand are Professor Beard's *Charter of the Social Sciences* and Professor Johnson's *Introduction to the History of the Social Sciences*. The first is, to a certain extent, the work of several minds; the second is highly individual. Both read extremely well.

It is of course too early to attempt any general evaluation of the reports of the Commission. That Beard is liberal in his views and that he is a brilliant writer everyone who reads much knows. His "Charter" is a clear, coherent, and stimulating statement of the possibilities of social education. It is certainly much more than an exposition of the nature and purposes of the social studies—history, geography, civics, economics and the rest—as we have been accustomed to regard them. Spencer's *Education* occurs to mind as a parallel. His enthusiasm for science is matched by Beard's enthusiasm for history.

This he regards as the cornerstone of a program of civic instruction. He recognizes that an ideal program cannot be carried out. There are too many conditioning factors. Society changes. Many policies of government are highly controversial. The doctrines of the schoolroom frequently clash with the practices of life outside. Nevertheless, students should be trained to face debatable questions and should become familiar with the concept of progress.

Professor Johnson comments caustically on the advancement of ideas as new which in fact are very old. He shows the value of a sound knowledge of the history of education to those who teach, and enlivens his account throughout with specific facts and references. The oldest history lesson he knows is to be found in the fourth chapter of Joshua. It started with a current event! In the days of Joshua, he declares, the project method was taken as a matter of course.

Professor Johnson is nothing if not provocative—and slyly and ironically humorous. His little volume tends to reveal the naïveté of some of the reformers who have just become aware of the social studies. After all, it is hard to discover anything new under the sun.

PSYCHOLOGY TODAY

The general title given to a manual prepared for the National Advisory Council on Radio in Education[4] may be used to announce a review covering also two recent contributions to the literature on the processes of learning. Thirty lecturers undertook to tell the people what o'clock it is in psychology. Professor Bingham has edited their remarks, which are accompanied with suggestions for reading and lists of references. The whole provides a handy and highly stimulating desk book.

Professor Thorndike promised in his lectures on *Human Learning* (Century Company, 1931) that the facts on which his statements were based would be published in full. This has now been done.[5] Mere

[3] *Charter of the Social Sciences.* By Charles A. Beard. *An Introduction to the History of the Social Sciences.* By Henry Johnson. Scribner's, 1932.
[4] *Psychology Today.* By Walter V. Bingham. University of Chicago Press, 1932.
[5] *The Fundamentals of Learning.* By Edward L. Thorndike. New York: Teachers College, Columbia University, 1932.

repetition of a situation is shown to be, "in and of itself," not productive of learning. Nor does the mere repetition of connections accomplish more. The important factor is that of "belonging." Meaning, then, turns out to be the basic element in learning.

This new conception will do much toward meeting the criticisms of those who have professed to find in the Thorndike educational psychology a warrant for excessive emphasis on formal drill. That Thorndike himself has always held the broader view is beside the point. Many who knew him only through his writings got a different impression. The appearance of this technical study, giving the results of many carefully conducted experiments, ought to restore the balance.

Professor Book has attempted to present an eclectic view with a distinctly practical purpose.[6] He begins by reviewing the study of Bryan and Harter on telegraphy, which he calls the first scientific study of the learning process, and so emphasizes the acquisition of measurable skills. The biologists and the animal psychologists are noted; so also are McDougall and the other exponents of the theory of native impulses. Nor is the "configuration" school overlooked.

On the whole, the effect of the treatment is to emphasize objective psychology and habit formation. The book maps out a field of work requiring several months, at least a year, of serious study by seniors or graduates. Practical applications are prominent. The discussion is gathered up at the close in a chapter of summarizing statements of principles, each followed by brief exercises. There are questions on the text but no references except as they appear in footnotes.

The work is distinctive, reflecting the author's peculiar way of looking at the subject. It contains a large amount of information digested into the discussion. The student that masters this will know that he has been to college. Instructors in educational psychology will welcome another text which widens by so much the range of choice and brings scientific material within reach. Both feeling and emotion are absent from the index. There is little in the book that appears likely to assist those interested in the development of attitudes or the integration of personality. Probably these matters were passed over as not having yielded as yet to scientific determination.

THE SOCIAL STUDIES IN SECONDARY SCHOOLS

Teaching the Social Studies, by Miss Fancler and Professor Crawford,[7] is a compilation from many sources. To a student beginning to orient himself in the field, it would be of practical help since by means of it he could quickly discover many of the reports and treatises he ought to examine. The authors do, of course, express a point of view in their selection of material and occasionally they make direct statements of opinion.

The almost complete absence of scientific information is a striking feature. Surveys of what is taught are available, it is true, but as compared with subjects like reading and arithmetic in the elementary school, geography, history, and civics in the high school have hardly been subject to scientific study at all. Teachers will glean a number of helpful ideas from this book and will be stimulated, let us hope, to set about the task of ascertaining the facts upon which reasoned opinion must rest.

[6] *Economy and Technique of Learning.* By William F. Book. D. C. Heath and Company, 1932.
[7] *Teaching the Social Studies.* By Della G. Fancler and Claude C. Crawford. Published by C. C. Crawford, Los Angeles, 1932.

ON THE TECHNIQUE OF TEACHING

What one of Shakespeare's characters said about good is certainly applicable to the art of teaching—there is nothing either progressive or otherwise, but thinking makes it so. Professor Melvin uses the term for the second time in the title of a book[8] and is still in marked contrast to Palmer, for example, whose notions of what makes for progress in teaching appears to be quite different.

Melvin again makes use of the phrase, "unit of conduct," which he prefers to activity, complete act, or unit of work. He regards "unit of life" as interchangeable but fails to credit Professor Stone with coining the term while he was still at Farmville about 1905. This unit, he holds, is a basic concept of organization but should not be made to provide a single mode of procedure. He distinguishes four types of such units, namely, constructive, play, work, and mixed. These may be either physical or mental. For this analysis he claims a philosophic sanction.

As compared with the author's earlier *Progressive Teaching* (Appleton, 1929), this new volume is narrower in range and more thoroughgoing in treatment. The principal omissions are the chapters on the psychology of learning and on measurement. The author's own conception of the learning-teaching process has been more fully worked out. There are more examples in the book and some excellent pictures of modern school life. There is also a bibliography.

As a whole the work may be placed beside Morrison's sumptuous volume, which it resembles in format. It is the best discussion *in extenso* of the informal technique just as the other is the best of the formal technique. "Conduct unit" will not please all of the believers in activity but it is at least not so misleading as "mastery unit." Teachers may take up the volume confidently expecting to be enlightened in theory and positively guided in practice.

Miss Bildersee deals with the school subjects.[9] She first, however, makes her bow to the progressives by writing on "Principles of Modern Education." Obviously one cannot be expected to say much on that tremendous subject in seventeen pages. On the teaching of the subjects the writer has definite ideas. She comes close to laying down rules—first, second, third—and evidently believes most teachers should follow Taylor's admonition to shop workers: "Think only two things: What does this man want me to do? How does he want me to do it?"

From the book one can learn much as to current practice in the schools of New York. Whether he will regard the whole as providing a working program in supervision will depend upon his point of view.

Professor Reeves has still another ideal of what a book on teaching should contain.[10] He begins with building and site (alas, few teachers can choose either!), proceeds with classroom management, discusses interest and attention, also basic types of learning, interpolating a chapter now and then on procedures, and comes presently to "methods in special subjects," "measurement of results," and "teaching as a profession," not neglecting to tell how the teacher may get a desirable position. In these days that closing section will certainly appeal.

This book is the outgrowth of the author's work in education in a women's col-

[8] *The Technique of Progressive Teaching.* By A. Gordon Melvin. John Day Company, 1932.
[9] *Teaching in the Primary Grades.* By Dorothy Bildersee. New York: D. Appleton and Company, 1932.
[10] *Standards for High School Teaching.* By Charles E. Reeves. D. Appleton and Company, 1932.

lege. It was intended to provide standards to guide the students in observation and practice; there is a workbook to use in connection. A good idea of the author's position may be conveyed by the statement that he provides a formula for daily lesson plans. He speaks feelingly of his indebtedness to Morrison of Chicago, particularly in the matter of measuring the attentiveness of the pupils. The contrast between this treatment of the technique of teaching and that of Melvin could hardly be greater. Somebody must be wrong.

A COMMENT ON THE REVIEW OF *STANDARD PRACTICES IN TEACHING*

Dr. Melvin's very kind notice of Bagley and Macdonald's *Standard Practices in Teaching* in this journal for January includes the following paragraph, upon which I am tempted to comment:

"From the point of view of philosophy, it is perhaps anomalous to find that the chapter on the assignment procedure is largely colored by a subject-matter conception of teaching, while in the chapter on activities a conduct theory is implied. . . . Eclecticism may liberally sanction all widely recognized practices but it cannot ally itself with any clear philosophy of education. Rather does it reflect a philosophy which is harmonized pragmatically but not actually."

I do not object at all to the charge of eclecticism. In writing textbooks for prospective teachers, as in my own classroom teaching, I try to give a just account of all theories and practices which have the indorsement of competent members of our guild. To take any other course with those who are just entering our field, or with others who are not as yet oriented in educational theory, would be, in my judgment, quite without justification. Indeed deliberately to indoctrinate such persons with one's own particular point of view by excluding a fair presentation of competing theories would be to use a privileged position in a most unworthy way.

I cannot, however, accept Dr. Melvin's contention that a philosophy of education which recognizes the importance of subject matter cannot consistently find a place as well for so-called "activities," or that a philosophy of education which emphasizes the transmission of the cultural heritage as the primary function of the teacher is thereby precluded from having any concern with the learner's "conduct."

WILLIAM C. BAGLEY

SIGNIFICANT ARTICLES

THE CITIZENS CONFERENCE ON THE CRISIS IN EDUCATION

A full report of the conference on the crisis in education, called by President Hoover and presided over by Secretary Wilbur and Commissioner Cooper, will be found in *School and Society* for January 21. The report was contributed by Belmont Farley of the National Education Association. The actual situation with regard to the national income and retrenchment already made in education was set forth by the Research Division of the N. E. A. and the United States Office of Education. Other reports were made by Frank Morrison for the American Federation of Labor, Charles E. Hearst for the American Farm Bureau Federation, and Howell Cheney for the National Association of Manufacturers. The work of the conference was carried on in part by means of committees presided over by such leaders as Superintendent Frank Cody of Detroit, President Edward C. Elliott of Purdue University, and E. J. Howenstine, president of the Association of Boards of Education of Ohio. A series of resolutions was finally adopted as follows:

1. Education is a fundamental obligation of public policy, related inseparably to economic

conditions, and to governmental administration, namely, organized society and not the Federal Government.

2. Educational procedure must be evaluated eventually in terms of far-reaching and broadly inclusive social purposes.

3. In this conference we are concerned with one aspect of the educational problem—the adjustment of school costs to the long-term economic conditions of the present emergency, with no damage to the child.

4. Education is a necessity, not a luxury, since the growth of the child cannot be halted or postponed during an economic emergency.

5. The state must assume the responsibility within its means of assuring adequate public education to all local communities, irrespective of their financial condition.

6. Legislative bodies must deal with this vital function of our government not only as an emergency measure but take such steps as may be necessary to treat with it successfully for a period of years with full recognition of the states' obligation to provide for an adequate system of public schools.

7. All governments, local, state, and national, must direct attention to the immediate reformation of the system of taxation.

8. Immediate efforts should be made through the raising of the general level of commodity prices, the correction of serious economic maladjustments, and otherwise, to increase the volume of income and purchasing power, and thus to provide the moneys necessary for a proper educational program. If this is not done, widespread injury will result, not only to the cause of education, but to the value of all obligations, public and private.

9. Whereas, a serious decline has occurred in the volume of the national income and whereas grave injury has consequently been done to the cause of education through injudicious and unwise reduction of educational programs, the closing of schools, and otherwise:

And whereas, the assurance of adequate educational opportunity to all children is a fundamental social obligation which will not properly be met unless the volume of income and purchasing power is promptly restored to a higher level;

And whereas, this conference is deeply impressed with the seriousness of this situation but feels that the suggestion of adequate remedies is beyond the scope of its instructions and mission:

Therefore, Be it Resolved, that this conference recommend the careful consideration by another conference or otherwise, of steps deemed appropriate and necessary for increasing the level of income and purchasing power.

SOCIAL RECONSTRUCTION THROUGH EDUCATION

One of the main themes of the regional conference recently held in New York City by the Progressive Education Association seems to have been, "The Relation of Education to the Social Order." Apropos of this, *Progressive Education* for December, 1932-January, 1933 prints an article by Harold Rugg originally prepared for the Sixth World Conference of the New Education Fellowship held at Nice. Proceeding from the premise that "industrial civilization is on trial," Professor Rugg proposes two problems in education: "(1) What are the concepts and problems of our changing civilization which should constitute both the needed social program of action and the outline of the educational program? (2) What are the elements of a creative philosophy which shall be appropriate for the new social order?"

He argues that the school itself must first undergo a thoroughgoing reconstruction. The initial step is the building of a new program of work based upon a study of modern social problems. In order to make this effective we must also evolve a new social philosophy. He thinks the Dewey philosophy is essentially a method of thought. What we need is "a philosophy, the loyalties of which shall be so inclusive as to guide men in all the situations of life."

A TESTING PROGRAM FOR ELEMENTARY SCHOOLS

In *Teachers College Record* for January, Professor Ralph B. Spence presents a comprehensive plan for testing in elementary schools. He first attempts to make clear why a testing program is necessary by stating the problems to be met and showing that teachers' marks and judgments alone are inadequate. He would make the testing program a definite part of the educational structure. It should be characterized as follows:

Supplementary *not* Duplicative
Usable *not* Confusing
Economical *not* Burdensome
Comprehensive *not* Sporadic
Suggestive *not* Dogmatic
Progressive *not* Static

Professor Spence would give two group tests in kindergarten-first grade, followed by one group test in fourth grade. These would be paralleled with the use of batteries of achievement tests and also with special achievement tests in particular subjects. He concludes that such a program is feasible inasmuch as the total cost would be a very small fraction of the total per capita expenditure for the elementary school.

DEBUNKING THE RESEARCH RACKET

The January number of *Clearing House* is devoted to the general topic, "Bunk in Education." Professor P. W. L. Cox of New York University writes on "The Research Racket." He says, "The racket is not intentionally or consciously undertaken," but is destructive nevertheless. He thinks the rise of the curriculum research specialists is due largely to confusion regarding curriculum. We should recognize that education itself is and cannot be a science, that the effects of no human institution can be measured objectively, that carefully stated assumptions and tentative hypotheses are of fundamental importance. He further contends that research workers frequently misinterpret the meaning of their findings and that what is needed on the part of administrators and teachers is scientific attitude rather than proficiency in research technics. Most of all, he deplores the present dualism of educational science on the one hand and educational philosophy on the other. Probably the depression will do much to eradicate the research racket.

BETTER MOVING PICTURES

Catheryne Cooke Gilman, Chairman of the Committee on Motion Pictures appointed by the National Congress of Parents and Teachers, gives in *Child Welfare* for January an explanation of the new plan worked out by the Congress for "better movies." The plan provides for cooperation with the departments of state and national governments, universities, research centers, historical societies, art institutions, museums, and industrial and scientific laboratories. Film libraries and film catalogues will be established and systematic distribution of visual aids to education and non-theatrical pictures will be undertaken. Mrs. Gilman says that the plan involves a complete change of emphasis, due to the failure of proposals for coöperation made by the motion picture industry itself. So far little improvement has appeared in the production of motion pictures for amusement purposes; instead, a false sense of security has been developed. She explains the difficulties which have stood in the way and believes that these can be avoided in the new set-up.

HISTORY IN THE ELEMENTARY SCHOOLS OF NORWAY

An interesting survey of the program in the teaching of history in the elementary

schools and teacher-training institutions of Norway will be found in *The Historical Outlook* for December. The writer is Mr. Einar Boyesen, whose statement has been translated by Dr. Joseph Strayer of Princeton University and Dr. Ruth McMurry of Teachers College, Columbia University. The elementary school course in Norway covers some seven years, beginning at about the age of seven. Systematic instruction in history opens with the fourth school year. Before this, a foundation is laid by means of so-called Local Studies. The main objectives of the course are: "(1) acquaintance with the most important figures and events in national history; (2) those events in world history which have had the greatest influence upon our own history; (3) the characteristic features of our social order."

In the course for the city of Oslo there is the added item, to strengthen their love for their nation. Progress has been made in attaining objectivity in the textbooks used. Boastfulness with regard to the homeland, as well as senseless talk concerning other nations, is avoided. Cultural history is emphasized and the history of war is forced into the background. The biographical method is prominent. One striking feature is the lecture method, which takes the form of epic presentation. Teachers are trained in three-year training schools called seminars, and a fairly severe requirement in history is made for graduation.

THE NEW BOOKS

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The Psychology of Study. By C. A. Mace. New York: Robert M. McBride & Co., 1933. Pp. 96. $.80.

Prejudice and Impartiality. By G. C. Field. New York: Robert M. McBride & Co., 1933. Pp. 116. $.80.

A Brief Survey of English Literature. By Ernest Pickering. New York: Robert M. McBride & Co., 1932. Pp. 254. $.90.

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Educational Psychology. By Harry L. Hollingworth. New York: D. Appleton and Co., 1933. Pp. 540. Illus. $3.00.

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Carrying the Mail. By Avah W. Hughes. New York: Teachers College, Columbia University, 1933. Pp. 253. Illus. $2.25.

Study Guide in Secondary Education. By Edgar M. Draper and Alexander C. Roberts. New York: Century Co., 1933. Pp. 151. $1.00.

The Dynamics of Education. By Hilda Taba. New York: Harcourt, Brace and Co., 1933. Pp. 278. $3.00.

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The Validity of the Indiana High School Accrediting Criteria. By H. H. Remmers and O. C. Trimble. Lafayette, Ind.: Bulletin of Purdue University, Vol. XXXIII, No. 2, October, 1932. Pp. 20.

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